Su C.

[Does institutional reform improve the impact of investment bank reputation on the long-term stock performance of initial public offerings?](#).

British Accounting Review 2015, 47(4), 445-470.

Copyright:

© 2015. This manuscript version is made available under the [CC-BY-NC-ND 4.0 license](#)

DOI link to article:

<http://dx.doi.org/10.1016/j.bar.2015.09.002>

Date deposited:

22/04/2016

Embargo release date:

12 September 2017

This work is licensed under a [Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International licence](#)

Does Institutional Reform Improve the Impact of Investment Bank Reputation on the Long-Term Stock Performance of Initial Public Offerings?

Chen Su*

Corresponding author

Newcastle University Business School, 5 Barrack Road, Newcastle upon Tyne, NE1 4SE, UK

Tel: +44 (0) 191 208 1656; Email: chen.su@ncl.ac.uk

(Received 28 September 2014, Revised 5 September 2015, Accepted 10 September 2015, Available online 12 September 2015)

To cite this article: Chen Su (2015) Does Institutional Reform Improve the Impact of Investment Bank Reputation on the Long-Term Stock Performance of Initial Public Offerings?, *The British Accounting Review*, 47:4, 447-470.

To link to this article: <http://doi:10.1016/j.bar.2015.09.002>

ABSTRACT

This study examines the impact of investment bank (IB) reputation on the long-term stock price performance of Chinese initial public offerings (IPOs) over the period 1993 to 2010. For comparison purposes, the whole sample period is separated into two sub-periods by the 2001 IPO allocation system reform: the quota system period from January 1st, 1993 to April 22nd, 2001 (hereafter, the pre-reform period) and the approval system period from April 23rd, 2001 to December 31st, 2010 (hereafter, the post-reform period). Using two time-varying proxies for IB reputation, we find *no* impact of IB reputation on the three-year buy-and-hold abnormal returns (BHARs) during the pre-reform period, but a significantly *positive* impact during the post-reform period. Our results are robust to various alternative methodological approaches in controlling for the problem of endogeneity and the cross-sectional correlations in abnormal returns.

Keywords: Investment bank reputation; IPO long-term stock performance; IPO allocation system reform; China stock market

JEL classification: G15, G24, G28, G32

* Acknowledgements: The author wishes to thank Nathan L. Joseph (the editor) and two anonymous reviewers for constructive comments and suggestions that help significantly improve this paper. The author is also grateful to Vivien Beattie, Darren Duxbury, Michael A. Firth, Hwa-Hsien Hsu, Simon Hussain, Paul H. Malatesta, S. Ghon Rhee, and Pauline Weetman for helpful advice and comments on earlier drafts of this paper. This work was financially supported by the Faculty of Humanities and Social Sciences (HaSS), Newcastle University, under the Faculty Research Fund (Autumn/2012, OSR/0372/FREF/0019), and by Newcastle University Business School under the School Pump Priming/Research Fund (2013/14, OSR/0372/SPPF/0009). All errors and omissions are my own.

1. Introduction

A growing body of theoretical and empirical research suggests that financial intermediaries improve information quality in capital markets, and in turn optimize resource allocation. Investment banks (IBs), as important financial intermediaries in the stock market, signal and certify issuer earnings quality during the initial public offering (IPO) process, helping mitigate information asymmetry between issuers and prospective investors (Booth & Smith, 1986; Carter & Manaster, 1990). A theoretical model developed by Chemmanur & Fulghieri (1994) implies that the more prestigious the IB, the more effective it will be in decreasing the influence of information asymmetry during the IPO process. Carter & Manaster (1990), Megginson & Weiss (1991), Carter, Dark, & Singh (1998), and others empirically examine various samples of IPOs issued in the 1980s and find a negative relationship between IB reputation and IPO initial returns. They attribute the lower level of IPO underpricing to the superior certification benefit provided by more prestigious IBs. The role of IBs reflects not only on their activity in the primary market, but on the entire array of activities in which they get involved. For example, prestigious IBs can enhance the long-term performance of IPOs through actively participating in aftermarket transactions (Michaely & Shaw, 1994; Carter et al., 1998). It is reasonable to presume that prestigious IBs usually benefit from their excellent network of brokers to distribute IPO shares and from their influential analyst coverage in the aftermarket (Carter et al., 1998; Jenkinson & Ljungqvist, 2001). For example, in examining 947 IPOs over the period 1984 to 1988, Michaely & Shaw (1994) report that IPOs managed by more prestigious IBs significantly outperform their counterparts in the long term, in line with Carter et al. (1998) and Dong, Michel, & Panders (2011).

Although the influence of IB reputation on IPO price performance has been well-documented in some developed markets,¹ it may not be realistic to expect a similar effect in emerging markets where there exist more severe information asymmetry and much lower level of information efficiency (Harvey, 1995; Chan, Menkveld, & Yang, 2008). In such inefficient markets, it takes longer for any information to be fully incorporated into asset prices, which can cause the role of IBs in emerging markets to be distinct from that observed in developed markets. However, very little attention has been paid to the impact of IB reputation on IPO price performance in emerging markets. This study thus attempts to fill the gap by shedding new light on the China stock market, one of the largest and most important emerging markets in the world. In particular, its institutional setting has important characteristics that are different from and independent of those in developed markets, i.e., the dominance of individual investors, the long lag between the offering and listing dates, and the existence of a large number of non-trading shares, etc., which have been extensively criticized as an indicator of operating inefficiency (Boycko, Shleifer, & Vishny, 1996; Chan,

¹ Empirical evidence shows that IBs help reduce information asymmetry in the US (Beatty & Ritter, 1986; Booth & Smith, 1986; Chemmanur & Fulghieri, 1994; Carter et al., 1998; Dunbar, 2000; Lee & Masulis, 2011), in the UK (Slovin, Sushka, & Lai, 2000), and in Japan (Cooney, Kao, & Schallheim, 2003).

Wang, & Wei, 2004). The China stock market, therefore, provides a unique arena to test whether the role of IB reputation helps improve informational efficiency and transparency in an emerging market context.²

In addition, our particular attention to the China stock market is motivated by further consideration that the role of IBs during the IPO process has substantially changed following the IPO allocation system reform in 2001. Specifically, a *quota* system was adopted in the China stock market before 2001, under which the aggregate quantity of equity to be issued each year is determined by the central government. The China Securities Regulatory Commission (CSRC), the regulatory authority of the China securities market on behalf of the central government, rather than IBs, was in charge of checking and supervising IPO firms' credit, business risk, and offering size, etc., as well as determining the pricing and timing of IPOs. The quota system was replaced by a more market-oriented *approval* system in April 2001, under which the central government no longer placed a cap on the flow of funds raised or the number of IPOs issued in each year. Since then, Chinese IBs have been granted more freedom in pricing IPOs and taken more responsibility to evaluate issuers' credit standing as well as risk and thereby to recommend qualified firms to the CSRC for the final offering approval. Such institutional reform in the China stock market makes it quite interesting to identify whether the enhanced role of IBs is helpful in improving the stock performance of IPOs in the long term. To the best of our knowledge, this is the first systematic and comprehensive study that comparatively examines the impact of IB reputation on the long-term stock performance of Chinese IPOs before and after the 2001 IPO allocation system reform.

For comparison purposes, we separate the whole sample period into two sub-periods: the quota system period from January 1st, 1993 to April 22nd, 2001 (hereafter, the pre-reform period) and the approval system period from April 23rd, 2001 to December 31st, 2010 (hereafter, the post-reform period). Using a sample of 1,749 Chinese IPOs with the post-issue return evidence up to December 2013, we find some interesting evidence and make significant contributions to the finance literature in several aspects. Specifically, previous studies generally ignore the influence of IB reputation in explaining IPO price anomalies in emerging markets (Yong, 2007), mainly due to the non-existence of a transparent and convincing ranking system regarding IB reputation. We supplement the finance literature by constructing two novel proxies for IB reputation, based on a three-year moving average of the aggregate gross proceeds raised or the total number of IPOs managed by each IB in each calendar year. Unlike previous measures generally based on the simple assumption that IB reputation remains unchanged over the whole sample period (Carter & Manaster, 1990; Megginson & Weiss, 1991; Carter et al., 1998; Chen, Shi, & Xu, 2013), our proxies are thus dynamic and reflect changes in IB reputation over a long period of time, i.e., enormous takeovers of Chinese IBs occurring over the past two decades. In particular, we provide a complete list of 165 Chinese IBs that got involved in at least one IPO over the period 1993 to 2010, based on both proxies

² More institutional features of the China stock market are as discussed in Wang, Wong, & Xia (2008), Su and Bangassa (2011), and Su and Brookfield (2013), among others.

for IB reputation, as well as a list of major takeovers of Chinese IBs occurring throughout the whole sample period (see Appendices I & II).

We find that IB reputation has *no* significant impact on the long-term stock performance of IPOs during the pre-reform period, but a significantly *positive* impact during the post-reform period. Specifically, during each allocation system period, all IPOs are sorted into three *reputation* groups: Low, Medium, or High, according to whether the value of IB reputation is included within the lowest 30, middle 40, or highest 30 percentile, respectively. We find that the difference in mean three-year buy-and-hold abnormal returns (BHARs) of IPOs between Low and High *reputation* groups (0.573%) is statistically insignificant (t -stat = 1.24; Kruskal–Wallis $\chi^2 = 1.64$), during the pre-reform period. However, during the post-reform period, the mean three-year BHAR of IPOs in High *reputation* group (12.023%) is significantly higher than that of IPOs in Low *reputation* group (0.556%) at the 1% level (t -stat = 3.43; Kruskal–Wallis $\chi^2 = 19.25$). Our results are robust to several alternative methodological approaches, i.e., the standard two-stage least squares (2SLS) estimation and the Heckman (1979) two-stage procedure, in controlling for the problem of endogeneity, as well as the calendar-time portfolio approach in correcting for the cross-sectional correlations in the event-time BHARs. The differential relationship between IB reputation and IPO long-term stock performance during the pre- and post-reform periods not only provides additional empirical evidence in an emerging market context, but has important relevance to both financial regulators and market participants, in particular, to international practitioners, such as the Qualified Foreign Institutional Investors (QFIIs),³ who now have great interests in investing firms listed on the China stock market.

The remainder of this paper is organized as follows. The following section presents institutional background, related literature, and hypothesis development. Section 3 describes data and methodological approaches, while empirical results are presented in Section 4. The final section concludes this study.

2. Institutional Background, Related Literature, and Hypothesis Development

2.1. 2001 IPO Allocation System Reform

The China stock market has experienced tremendous development since the launch of the Shanghai Stock Exchange (SHSE) in 1990 and the Shenzhen Stock Exchange (SZSE) in 1991. The total number of listed firms was 2,489 by the end of 2013, including 953 on the SHSE and 1,536 on the SZSE.⁴ Such rapid growth has created substantial demand for investment banking services, but the central government remains in tight control of the financial services industry, particularly under the *quota* system in effect before April 2001. Specifically, the central government determined the aggregate quantity of equity to be issued each year to maintain control over the size and stability of the China stock market (Fang, 1995), and then allocated

³ In November 2002, the CSRC and the People's Bank of China (PBOC; the central bank of China) introduced the QFII program as a way for foreign capital to access the China capital market. By the end of 2013, 228 foreign institutions had been granted the QFII licenses and approved with a total investment quota of USD 49.701 billion, according to the State Administration of Foreign Exchange (SAFE).

⁴ The total market capitalization of A-shares and B-shares was RMB 15.117 trillion in the SHSE and RMB 8.791 trillion in the SZSE by the end of 2013; the total number of investors was 114.442 million in the SHSE and 110.856 million in the SZSE by the end of 2013. The data are collected from the official websites of the SHSE and SZSE.

among regional governments according to their needs. Regional governments often cut down the issuing proceeds for each issuer so that more firms could go public and yet keep the region within its quota limit. In 1996, the quota was modified from restriction on the amount of equity to be issued to restriction on the number of firms to be listed. The quota system made IPO qualification a scarce resource, inevitably leading to fierce regional competition for the allocation of quotas. Such competition had developed great interests for regional officials in their regions' economic performance, which became a critical factor for their own career advancement (Maskin, Qian, & Xu, 2000). That is, gaining more quotas for their regions and being able to fulfill them were viewed as signs of regional officials' political achievement; failure to meet the current year's quota resulted in the reduction of future quota, which had an adverse effect on regional officials' political reputation (Li & Zhou, 2005). Therefore, to maximize the quota allocation and to avoid negative political implications of a failed IPO, regional governments might either directly assist IPO candidates in earnings manipulation through financial subsidies, or assign underwriting tasks to their acquiescent IBs that are more willing to cover up for them (Aharony, Lee, & Wong, 2000; Wang et al., 2008). Under the quota system, the CSRC, rather than IBs, was in charge of examining and supervising the issuers' credit, business risk, and offering size, etc., as well as determining the pricing and timing of IPOs, and IBs were subject to accountability and immune from punishments related to the poor quality of issuers. As a result, the listing of poor quality firms could seriously harm investor interests and impede market development.

To promote a more market-oriented and internationalized IPO allocation system, the CSRC released *Circular on Promulgation of Procedures for Public Offering Review of the China Securities Regulatory Commission* (Ref: No. 16 [2000]) on March 16th, 2000 and *Standards for Contents and Formats of Information Disclosure by Companies Publicly Offering Securities No. 1: Prospectuses* (Ref: No. 41 [2001]) on March 16th, 2001, marking the implementation of a new approval system in replace of the old quota system in the China stock market. The central government no longer put a cap on the flow of funds raised or the number of IPOs issued in each year and, since then, part of the approval authority used to be an exclusive responsibility of the CSRC has been shifted to IBs. For example, IBs have been taking on more responsibility to evaluate issuers' credit standing and to recommend qualified firms for final verification as long as the firm meets all relevant listing standards set by the CSRC and requirements stipulated by the *Securities Law* and the *Company Law*, although the CSRC as the legally authorized approval authority still has the final right to approve or veto listing applications. In this way, IBs are motivated to improve the quality management of issuers and intensify their risk controls. Specifically, the CSRC stipulates that the leading IB should supervise the issuer for one year prior to the IPO, including giving advice on the issuer's corporate governance, corporate structure, financial system, and the like, and should be responsible for the truthfulness of disclosure. In addition, the IB's responsibility in regard to the issuer lasts for two years after going public, in case the issuer's financial performance deteriorates significantly during that period. This gradual improvement in the overall regulatory environment and in the independence of IBs is intended to

restrict the extent of earnings manipulation as it makes more difficult for regional governments to collude with issuers residing in their jurisdictions.

2.2. Related Literature and Hypothesis Development

Two important aspects of firms that engage in IPOs have been well documented in the finance literature: initial underpricing and the subsequent long-term underperformance as measured by their abnormal returns. Unlike the consistent evidence on underpricing in various markets around the world, empirical evidence on the long-term stock performance of IPOs remains controversial (Loughran, Ritter, & Rydqvist, 1994; Ritter & Welch, 2002; Yong, 2007). Although there is no widely accepted theory for IPO long-term performance, previous studies suggest that information asymmetry offers a reasonable explanation (Brav & Gompers, 1997; Jenkinson & Ljungqvist, 2001; Levis, 2011). It is expected that under information asymmetry, the existing shareholders and managers have information advantages over investors in regard to the issuer (Loughran et al., 1994), as investors rely primarily on financial statements in the offering prospectuses, which are supposed to be presented in a favorable manner. That is, issuers might boost earnings relative to cash flows before the IPO and the profitability declines after the IPO (Teoh, Welch, & Wong, 1998). Given information asymmetry, investors cannot effectively identify the quality of issuers, leading to an adverse selection problem, and eventually a *lemon* market (Beatty & Ritter, 1986; Rock, 1986).

In order to solve information asymmetry in the new issue market, it is essential to introduce a trustworthy third party to deliver valuable information to investors (Baron, 1982). IBs, as financial intermediaries in the IPO market, play an important certification role as information producers to reduce information asymmetry between insiders and prospective investors. Booth & Smith (1986) consider IBs to be an integral part of the capital raising decision. They argue that issuers can send efficient signal to investors through the process of choosing IBs, since prestigious IBs carefully consider the quality of issuers and their own reputation before they decide to manage the IPO. Also, prestigious IBs usually hire high quality auditors to prevent aggressive earnings management; as a result, they can provide reliable certification of their clients (Aharony, Lin, & Loeb, 1993; Klein, 2002; Jo, Kim, & Park, 2007). If investors fail to understand the certification role of IBs, they will overpay (both at the offering price and in the immediate aftermarket) for IPOs lacking in certification from prestigious IB(s), thereby causing the underperformance in the long term (Dong et al., 2011).

Furthermore, prestigious IBs can enhance the long-term stock performance of IPOs through actively participating in aftermarket transactions. It is reasonable to presume that prestigious IBs usually benefit from their excellent network of brokers to distribute shares and from their influential analyst coverage in the aftermarket to reduce information asymmetry (Baron, 1982; Carter et al., 1998; Jenkinson & Ljungqvist, 2001; Loughran & Ritter, 2004). Also, Beatty & Ritter (1986) argue that in order to attract more investors to subscribe new issues, more prestigious IBs tend to introduce less risky firms to the market. For example, in examining 947 IPOs over the period 1984 to 1988, Michaely & Shaw (1994) report that IPOs managed by more prestigious IBs significantly outperform their counterparts in the long term. Consistent with this,

Carter et al. (1998) find less negative three-year BHARs of IPOs managed by more prestigious IBs, based on a sample of 2,292 IPOs from 1979 to 1991. Also, Dong et al. (2011) find consistent evidence and argue that IBs play an active marketing role in IPO promotion, price stabilization, and analyst coverage, etc., thereby helping improve the long-term performance of IPOs.

IBs, as repetitive players in the stock market, obtain and accumulate their reputation capital, which is directly affected by the accounting and aftermarket stock performance through their previous underwritings (Dunbar, 2000; Fang 2005). If investors and/or issuers feel that they are misled by an IB in a previous IPO investment, it will become much more costly for the IB to market future new issues and result in a reduction in the likelihood that the IB is employed by the issuer in subsequent seasoned offerings (James, 1992; Brav & Gompers, 1997). Prestigious IBs, therefore, invariably attempt to protect their reputation capital by reducing the probability of becoming involved with poor quality issuers. According to the above discussions and accounting for the changing role of IBs after the 2001 IPO allocation system reform in the China stock market, we test the following two main hypotheses:

Hypothesis 1: IB reputation has *no* impact on the long-term stock performance of IPOs during the pre-reform period;

Hypothesis 2: IB reputation has a significantly *positive* impact on the long-term stock performance of IPOs during the post-reform period.

3. Data and Methodology

3.1. Sample Selection and Description

Our sample consists of 1,749 IPOs issued either on the SHSE or SZSE over the period January 1993 to December 2010. To be included in our sample, IPOs have to meet the following criteria: i) the IPO has an offering price of at least RMB 2.00 per share; ii) the IPO is underwritten by IBs; iii) the IPO does not result from a takeover or a major restructuring scheme; and iv) the IPO is with available financial data. We also exclude all financial firms due to their highly regulated nature, according to the two-digit Industry Classification Benchmark (ICB) codes 83–87 (see Appendix III). Data on the offering price, first trading day closing price, gross proceeds, number of state-owned shares, total shares outstanding, offering and listing dates, and founding date of each IPO firm are collected from the China Stock Market & Accounting Research (CSMAR) database via Wharton Research Data Services (WRDS). We double-check the data for accuracy using the official websites of both stock exchanges, as well as the listing prospectuses of all IPO firms. Other data, such as the total monthly price return index of each IPO firm, as well as the SHSE and SZSE A-Share Indices, are collected from DataStream. The total monthly price return index has been adjusted for stock dividends, stock splits, and/or rights offerings.

<Table 1>

Table 1 shows the distribution of IPOs by the year of issuing over the sample period, in terms of the number of IPOs and raised aggregate gross proceeds. The gross proceeds are adjusted using the annual Consumer

Price Index (CPI; 2005 = 100), released by the National Bureau of Statistics (NBS) of China. Panel A shows that the mean gross proceeds raised by 963 IPOs issued during the post-reform period, RMB 1,050.32 million (USD 130.13 million), are significantly higher than those raised by 786 IPOs issued during the pre-reform period, RMB 395.02 million (USD 48.94 million), at the 1% level (t -stat = 5.47; Kruskal–Wallis $\chi^2 = 46.65$), which could be due to a number of giant state-owned enterprises (SOEs), e.g., oil firms, banks, and insurance firms that went public on the SHSE after 2000. Furthermore, in 2000, the CSRC began preparations to set up a small and medium enterprise (SME) Board on the SZSE, resulting in a three-year suspension of IPOs on the SZSE from 2001 to 2003. The SZSE launched the SME Board on May 27th, 2004, followed by a separate Growth Enterprise Board (a NASDAQ-type exchange, also known as the ChiNext Board), inaugurated on October 23rd, 2009, to promote more high-growth and high-tech firms. The mean gross proceeds raised by the 678 IPOs on the SME and ChiNext Boards over the sample period are RMB 593.56 million (USD 73.54 million). Thus, it is not surprising that the mean gross proceeds raised by 1,042 IPOs on the SZSE, RMB 509.52 million (USD 63.13 million), are significantly less than those raised by 707 IPOs on the SHSE, RMB 1,118.85 million (USD 138.62 million) at the 1% level (t -stat = 3.76; Kruskal–Wallis $\chi^2 = 42.64$).

3.2. Measure of IB Reputation

Given that the most popular Carter & Manaster (1990) measure based on *tombstone announcements* is inapplicable outside the US, we develop two proxies for IB reputation. The main proxy for IB reputation (IBR_{MAIN}) assumes that more prestigious IBs tend to have greater market share in terms of the raised gross proceeds, while the alternative proxy (IBR_{ALT}) assumes that IBs having successfully managed more IPOs are much better known by market participants and therefore have better reputation (Megginson & Weiss, 1991). Importantly, we take into consideration the view that IB reputation is built on observable past performance. That is, an IB that performs well during previous periods is expected to have an enhanced and measurable reputation in subsequent periods. In a departure from and an extension of usual assumption made in previous work that IB reputation remains unchanged over the whole sample period (Carter & Manaster, 1990; Megginson & Weiss, 1991; Carter et al., 1998; Chen et al., 2013), we account for numerous takeovers of Chinese IBs occurring over the past two decades, in attempts to capture the dynamic change in IB reputation over time.

Specifically, for a set of IBs I in each calendar year t , we first define reputation ranking of IB i , $IBR_{MAINi,t}$, on a continuous variable of $[0, 10]$: $10 \times \left[\ln x_{i,t} / \max_{i \in I} (\ln x_{i,t}) \right]$, where $x_{i,t}$ represents the raised aggregate gross proceeds by IB i in year t . Therefore, the IB with the highest aggregate gross proceeds raised in year t has a reputation ranking of 10, while an IB without managing any IPO in year t has a reputation ranking of 0. The three-year moving average ($t-3, t-2, t-1$) reputation ranking of IB i in year t is computed as: $IBR_{MAINi,t} = (IBR_{MAINi,t-3} + IBR_{MAINi,t-2} + IBR_{MAINi,t-1})/3$. The alternative proxy for IB reputation, $IBR_{ALTi,t}$, is calculated based on the three-year moving average ($t-3, t-2, t-1$) of the total number of IPOs managed by IB i in each calendar year t : $IBR_{ALTi,t} = (N_{i,t-3} + N_{i,t-2} + N_{i,t-1})/3$. If an IPO is co-

managed by two or more IBs, we split the raised aggregate gross proceeds and the total number of IPOs equally among them. To assist future research into the influence of IB reputation on IPO price anomalies in the China new issue market, we provide a complete list of 165 Chinese IBs that were involved in at least one IPO over the period 1993 to 2010, based on both proxies for IB reputation, as well as a list of major takeovers of Chinese IBs occurring throughout the whole sample period (see Appendices I & II).

3.3. Measure of IPO Long-Term Stock Performance

Various event-time and calendar-time approaches to measuring the long-term stock performance are vigorously debated in the literature, though there is no consensus as to the optimal methodological approach (Lyon, Barber, & Tsai, 1999; Brav, Geczy, & Gompers, 2000; Mitchell & Stafford, 2000; Schultz, 2003). Two alternative benchmarks are employed in this study: i) a reference portfolio benchmark based on the existing listed firms classified with similar size and book-to-market ratio (B/M) as well as within the same industry category, according to the two-digit ICB codes, for the event-time approach (see Appendix III for details on the construction of the reference portfolio benchmark);⁵ and ii) the intercepts derived from two multi-factor asset pricing models, i.e., the Fama & French (1993) three-factor model and the Carhart (1997) four-factor model, for the calendar-time approach.

3.3.1. Event-Time Approach

The average annual number of trading days in the China stock market is 244 over the sample period, with an average of 20 trading days per month. Hence, an event month is defined as a successive 20-trading-day interval following the first trading day. The long-term stock performance of IPOs is measured by the reference portfolio-adjusted BHARs over a period of 36 months after listing, excluding the initial returns.

Following the calculations proposed by Loughran & Ritter (1995), we define the reference portfolio-adjusted $BHAR_{i,T}$ on the IPO i for a holding period of T months as:

$$BHAR_{i,T} = BHR_{i,T} - BHR_{p,T} = \left[\prod_{t=1}^T (1 + R_{i,t}) - 1 \right] - \left[\prod_{t=1}^T (1 + R_{p,t}) - 1 \right], \quad (1)$$

where $R_{i,t}$ and $R_{p,t}$ represent the monthly returns on IPO i and its reference portfolio p , respectively, in event month t following listing; $BHR_{i,T}$ and $BHR_{p,T}$ represent the buy-and-hold returns on IPO i and its reference portfolio p , respectively, for a holding period of T months.

The equal-weighted reference portfolio-adjusted $\overline{BHAR}_T$ on N IPOs for a holding period of T months is computed as:

$$\overline{BHAR}_T = \frac{1}{N} \sum_{i=1}^N BHAR_{i,T}. \quad (2)$$

⁵ Although matching firms might be the most appropriate benchmark to measuring the long-term abnormal returns (Barber & Lyon, 1997), it is always a big challenge to find appropriate matching firms for Chinese IPO firms, in particular, for those giant SOEs issued after 2000. Lyon et al. (1999) point out that a reference portfolio is able to capture normal or expected return and to address the new listing and rebalancing biases. Perry & William (1994) claim that firms classified under the same industry and with similar size and B/M are subject to similar economic and competitive factors and thus have comparable operating, investing, and financing opportunity sets.

The bootstrapped skewness-adjusted t -statistic (t_{sa}) is used to evaluate the significance of $\overline{BHAR}_T$:

$$t_{sa}(\overline{BHAR}_T) = \sqrt{N} \left(S + \frac{1}{3} \hat{\gamma} S^2 + \frac{1}{6N} \hat{\gamma} \right), \quad (3)$$

where $S = \frac{\overline{BHAR}_T}{\sigma(\overline{BHAR}_T)}$ and $\hat{\gamma} = \frac{\sum_{i=1}^N (BHAR_{i,T} - \overline{BHAR}_T)^3}{N \sigma(\overline{BHAR}_T)^3}$, where $\hat{\gamma}$ is the estimation of the coefficient of skewness.

3.3.2. Calendar-Time Approach

To eliminate potential cross-sectional correlations in abnormal returns in the event-time approach and to achieve more robust statistical tests, we use two alternative calendar-time approaches to measure the long-term abnormal performance of IPOs. First, we compute the mean monthly abnormal returns for a diversified portfolio including IPOs issued within the last three years, relative to the reference portfolio benchmark. Second, two multi-factor asset pricing models are estimated to discover significant patterns in the time-series long-term stock returns. The Fama & French (1993) three-factor model is:

$$R_{p,t} - R_{f,t} = \alpha_i + \beta_i (R_{m,t} - R_{f,t}) + s_i SMB_t + h_i HML_t + \varepsilon_{i,t}, \quad (4)$$

where $R_{p,t}$ represents the IPO portfolio return in month t ; $(R_{m,t} - R_{f,t})$ represents the value-weighted return on the SHSE and SZSE A-Share Indices in month t , in excess of the risk-free rate;⁶ SMB_t represents the difference in monthly returns between portfolios of big and small-sized stocks; HML_t represents the difference in monthly returns between portfolios of high and low B/M stocks;⁷ and $\varepsilon_{i,t}$ represents the error term.

Carhart (1997) incorporates a momentum factor into the Fama & French (1993) three-factor model to capture the medium-term return continuation documented by Jegadeesh & Titman (1993). The Carhart (1997) four-factor model is:

$$R_{p,t} - R_{f,t} = \alpha_i + \beta_i (R_{m,t} - R_{f,t}) + s_i SMB_t + h_i HML_t + m_i WML_t + \varepsilon_{i,t}, \quad (5)$$

where WML_t represents the difference in monthly returns between portfolios of past winner and loser stocks; other variables are as defined in Eq. (4); $\varepsilon_{i,t}$ represents the error term.

A significantly positive or negative intercept term from the regression, therefore, indicates the presence of the long-term over- or underperformance of IPOs after controlling for the market, size, value, and momentum factors.

3.4. Cross-Sectional Regression Model

We estimate the cross-sectional OLS regressions to formally examine the impact of IB reputation on the long-term stock performance of IPOs. Like Carter et al. (1998), we first transform the equal-weighted

⁶ We use the three-month household deposit interest rate in China as the risk-free rate in this study as the three-month Chinese T-Bill, which started in 2001, does not have a sufficiently long history for our analysis.

⁷ We construct portfolios that mimic the size, value, and momentum factors in the China stock market, strictly following Fama & French (1993) and Carhart (1997).

reference portfolio-adjusted three-year BHARs to the natural logarithm of 1,000% plus each BHAR ($LNBHAR36$).⁸ The transformed dependent variable $LNBHAR36$ is regressed on the main and alternative proxies for IB reputation, separately, and on six control variables generally employed in previous studies to proxy for apparent risk of IPOs. We also include two indicator variables for years and industries, according the two-digit ICB codes, to control for the potential year and industry fixed effects, respectively. The OLS regression model is:

$$LNBHAR36 = \alpha_0 + \alpha_1(IBR_{MAIN} \text{ or } IBR_{ALT}) + \alpha_2 \text{Control variables} + YEAR + INDUSTRY + \varepsilon, \quad (6)$$

where the dependent variable, two IB reputation variables, and all control variables are as defined in Appendix IV; ε represents the error term.

<Table 2>

Table 2 sets out descriptive statistics (in Panel A) and Pearson correlation coefficients (in Panel B) for all variables in Eq. (6) during the pre- and post-reform periods. For example, Panel A shows a significantly negative reference portfolio-adjusted mean BHAR of -4.440% during the pre-reform period and a significantly positive mean three-year BHAR of 6.430% during the post-reform period, while the median values give an opposite result, i.e., the median three-year BHARs of -0.008% and -8.768% during the pre- and post-reform periods, respectively. In addition, more prestigious IBs tend to manage the large-sized and less risky and/or more established IPO firms, which are subject to relatively less uncertainty (Beatty & Ritter, 1986). In particular, IPOs issued during the post-reform period show some distinct characteristics, i.e. a smaller fraction of state-owned shares and a shorter lag between the offering and listing dates. A unique characteristic of the China stock market is the existence of a majority of non-tradable state-owned shares for public listed firms, making agency costs and illiquidity high (Boycko et al., 1996; Chen et al., 2006). The fraction of state-owned shares is reduced from 46.649% to 18.219% after the 2001 IPO allocation system reform. Another important characteristic is the longer time lag between the offering and listing dates compared with a relatively short time lag in developed markets. The average time lag during the pre-reform period is of 59.280 days, which is reduced to 14.025 days during the post-reform period. Generally, the long delay increases the uncertainty of the issuer and results in potential risk for subscribers of IPO shares. In addition, both proxies for IB reputation are highly correlated.

4. Empirical Results

4.1. Univariate Analysis Results

Table 3 presents the equal-weighted reference portfolio-adjusted BHARs of IPOs for up to 36 months after listing. The left side of Table 3 shows that IPO firms underperform their reference portfolio benchmark in

⁸ A Shapiro–Wilk test shows that the distribution of the equally-weighted reference portfolio-adjusted three-year BHARs over the period 1993 to 2010 is not normally distributed at the 5% level (p -value = 0.029), while the transformed dependent variable $LNBHAR36$ is normally distributed over the sample period (p -value = 0.337).

the long term during the pre-reform period. Specifically, we find a significantly negative two-year BHAR of -3.061% ($t\text{-stat} = -2.29$) at the 5% level and a significantly negative three-year BHAR of -4.440% ($t\text{-stat} = -2.59$) at the 1% level. However, during the post-reform period, IPO firms outperform their reference portfolio benchmark in the long term, showing a significantly positive two-year BHAR of 4.326% ($t\text{-stat} = 2.01$) at the 5% level and a significantly positive three-year BHAR of 6.430% ($t\text{-stat} = 2.75$) at the 1% level.⁹

<Table 3>

Table 4 presents the univariate analysis results of the reference portfolio-adjusted three-year BHARs of IPOs during the pre- and post-reform periods. All IPOs are sorted into three *reputation* groups: Low, Medium, or High, according to whether the value of IBR_{MAIN} (in Panel A) or IBR_{ALT} (in Panel B) is included in the lowest 30, middle 40, or highest 30 percentile, respectively. Panel A shows that mean three-year BHARs in each *reputation* group: -4.127% , -4.479% , and -4.700% for IPOs within the Low, Medium, and High *reputation* groups, respectively, is very close to that of the whole sample, -4.440% , during the pre-reform period. The parametric and non-parametric tests for the difference in mean BHARs between Low and High *reputation* groups is statistically insignificant ($t\text{-stat} = 1.24$; Kruskal–Wallis $\chi^2 = 1.64$), implying that IB reputation has *no* impact on the long-term stock performance of IPOs during the pre-reform period.

<Table 4>

However, during the post-reform period, we find a monotonically positive relationship between the long-term performance of IPOs and IB reputation in the three *reputation* groups. Specifically, Panel A shows that IPOs within the Low, Medium, and High *reputation* groups generate mean three-year BHARs of -0.556% , 7.476% , and 12.023% , respectively. Also, the mean BHAR of IPOs in High *reputation* group is significantly higher than that of IPOs in Low *reputation* group at the 1% level ($t\text{-stat} = 3.43$; Kruskal–Wallis $\chi^2 = 19.25$).¹⁰ The results presented in Panel B of Table 4 are qualitatively the same, strongly supporting our Hypotheses 1 and 2 that IB reputation has *no* impact on the long-term stock performance of IPOs during the pre-reform period, but significantly positive impact during the post-reform period.

<Figures 1a & 1b>

We further compare the three-year BHARs between IPOs managed by more and less prestigious IBs, in terms of the year of issuing, to rule out the concern that our results presented in Table 4 might be due to the extreme performance in a specific year. We segment all IPOs into High and Low *reputation* groups, according to the median value of IBR_{MAIN} (in Figure 1a) or IBR_{ALT} (in Figure 1b). Both Figures illustrate

⁹ Our out-of-sample evidence in the China stock market context supports Fama's (1998) viewpoint that the controversy over mixed results concerning the long-term performance of IPOs is not simply sample and market specific. We do not discuss the matter in further detail, as the main purpose of this study is to investigate the impact of IB reputation on the long-term stock performance of IPOs, rather than adding another piece of evidence to the vast literature on IPO price anomalies.

¹⁰ We also employ the non-parametric test for the difference in median BHARs between Low and High *reputation* groups, showing statistically insignificant (Kruskal–Wallis $\chi^2 = 1.43$) during the pre-reform period, but significant at the 1% level (Kruskal–Wallis $\chi^2 = 15.40$) during the post-reform period.

consistent evidence in each year of issuing that there is no significant difference of the three-year BHARs between Low and High *reputation* groups during the pre-reform period, while during the post-reform period, IPOs in High *reputation* group generate much higher three-year BHARs than those in Low *reputation* group.¹¹

4.2. Regional Analysis Results

Although the quota system is generally supposed to lead to rent-seeking activities and inefficient resource allocation (Aharony et al., 2000; Wang et al., 2008), Maskin et al. (2000) argue that regional governments have enough incentives to increase their political reputation with successful IPOs. They co-operate with their acquiescent IBs located in the same regions and select better quality IPO firms to enhance their regions' future access to quotas. During the pre-reform period, 254 out of 786 IPO firms (32.32%) in our sample choose their IBs located in the same regions. Tables 5 present the regional analysis results of the reference portfolio-adjusted three-year BHARs of IPOs during the pre- and post-reform periods, but we focus on discussing the results during the pre-reform period, as the results during the post-reform period are highly consistent with those shown in Table 4.¹²

<Table 5>

During the pre- and post-reform periods, we divide all IPOs into two *region* groups, according to whether the IPO firm and its IB(s) are located in the same or different regions. Panel A of Table 5 shows that, during the pre-reform period, the 254 IPOs managed by IBs in the same regions generate a mean three-year BHARs of -1.193% , much higher than that of -5.990% generated by other IPOs managed by IBs in the different regions. IPOs in each *region* group are also sorted into two *reputation* groups: Low or High, based on the median value of IBR_{MAIN} (in Panel A) or IBR_{ALT} (in Panel B). Interestingly, Panel A shows that in the same *region* group, the mean BHAR of IPOs managed by more prestigious IBs is significantly higher than that of IPOs managed by less prestigious IBs at the 10% level (t -stat = 1.90; Kruskal–Wallis $\chi^2 = 2.86$), while the results are insignificant in the different *region* group. Our results are qualitatively the same in Panel B of Table 5, using IBR_{ALT} as the alternative measure of IB reputation.

Further analyses show that the better long-term stock performance of IPOs in the same *region* group during the pre-reform period is driven by 108 IPO firms located in three economically advanced regions, Shanghai, Shenzhen, and Guangdong. IBs from the three regions dominate the underwriting of their local IPOs: 82.35% for Shanghai (42 out of 51), 91.43% for Shenzhen (32 out of 35), and 79.07% for Guangdong (34 out of 43). Specifically, during the pre-reform period, the 108 IPOs generate a positive mean three-year BHAR of 5.441% , relative to a negative mean three-year BHAR of -6.106% generated by other 146 IPOs

¹¹ We notice that the results for 2006–2008 in Figure 1a and 1b are relatively extreme, which could be attributed to the booming market over the period 2006 to 2008. For example, after a long-term downward trend from 2001 to 2005 (the SHSE Composite Index plunged from a record high of 2,245 points on June 14th, 2001 to 998 points on June 6th, 2005), the China stock market experienced a dramatic rebound from 2006 to 2007 until the 2008 global financial crisis (the SHSE Composite Index reached a new record high of 6,124 points on October 16th, 2007).

¹² We thank an anonymous reviewer for suggesting the regional analyses. The details on the regional locations of IPO firms and IBs are not tabulated for the sake of brevity, but available on request.

managed by IBs in the different regions. These results are not tabulated for the sake of brevity, but available on request.

4.3. Multivariate Analysis Results

To confirm the univariate analysis results, we estimate the OLS regression model of Eq. (6) on the reference portfolio-adjusted three-year BHARs using the main or alternative proxy for IB reputation (IBR_{MAIN} or IBR_{ALT}), along with other control variables. As expected, Panel A of Table 6 shows statistically insignificant coefficients on IBR_{MAIN} (t -stat = 0.15) in Regression (1) and on IBR_{ALT} (t -stat = 0.88) in Regression (2) during the pre-reform period, but significantly positive coefficients on IBR_{MAIN} (t -stat = 2.90) in Regression (3) and on IBR_{ALT} (t -stat = 3.04) in Regression (4) at the 1% level, during the post-reform period. Furthermore, during the post-reform period, the coefficient of IBR_{MAIN} (IBR_{ALT}) suggests that an increase of 1 on IB reputation, on average, gives rise to an additional increase of 5.5% (6.1%) on the mean three-year BHAR, showing strongly economic importance. The untabulated z -statistics also indicate that both coefficients on IBR_{MAIN} between Regressions (1) and (3) and coefficients on IBR_{ALT} between Regressions (2) and (4) are statistically different at the 1% level (p -value < 0.001).¹³ Overall, the OLS regression results are consistent with the univariate analysis results shown in Table 4 and again support Hypotheses 1 and 2.

<Table 6>

All regression results presented in Panel A of Table 6 are based on the whole sample of 1,749 IPOs on the SHSE and SZSE. However, the SZSE has been specially designed for young and high-tech-related small and medium-sized firms since the launch of the SME Board in May 2004 and the ChiNext Board in October 2009, whereas the SHSE attracts large-sized and more established firms. Thus, each stock exchange has a different risk profile that may affect the long-term stock performance of IPOs. We repeat all tests in Panel A of Table 6 exclusively using a sub-sample of 707 IPOs on the SHSE. The regression results presented in Panel B are qualitatively the same.¹⁴

4.4. Controlling for the Problem of Endogeneity

Much of the existing theoretical and empirical literature presents a potential self-selection bias, that is, the matching between issuers and IBs is not random (Beatty & Welch, 1996; Carter & Manaster, 1990; Fernando, Gatchev, & Spindt, 2005) as prestigious IBs tend to underwrite high quality issuers to preserve their reputation capital. If the characteristics of issuers that affect this choice are related to the long-term stock performance of IPOs, then the proxy for IB reputation and the error term will be correlated in the OLS regression, that is, the coefficients on IBR_{MAIN} and IBR_{ALT} in Regressions (1–8) will be biased. To

¹³ z -statistics are employed to test statistical differences between two coefficients: $z = (\beta_a - \beta_b) / (SE\beta_a^2 + SE\beta_b^2)^{1/2}$ (Clogg, Petkova, & Haritou, 1995).

¹⁴ We conduct several additional robustness checks. For example, we employ the reference portfolio-adjusted three-year BHAR without transformation ($BHAR36$) as the dependent variable, the results of which are qualitatively similar to those using the transformed variable ($LNBHAR36$). Also, we winsorize the extreme values of the dependent variable of $LNBHAR36$ and each IB reputation variable at 1% and 99% prior to regression estimation, to avoid any potential misleading conclusions resulted from outliers. The results based on a trimmed sample of 1,679 observations are also qualitatively the same, suggesting that outliers do not appear to be driving the results. These results are not tabulated for the sake of brevity, but available on request.

address the well-recognized problem of endogeneity, we employ the standard 2SLS estimation (Habib & Ljungqvist, 2001; Ljungqvist, Jenkinson, & Wilhelm, 2003; Fernando et al., 2005) and the Heckman (1979) two-stage procedure (Schenone, 2004; Fang, 2005; McCahery & Schwienbacher, 2010) in this sub-section.

4.4.1. Standard 2SLS Estimation

The standard 2SLS estimation is based on the *estimated* reputation ranking from a first-stage regression rather than using the proxies for IB reputation developed in Sub-section 3.2. Motivated by a recent study of Tian (2011),¹⁵ we construct an instrumental variable (*IV*) for the reputation ranking of the closest IB to each IPO firm.¹⁶ We believe that the IB nearest the IPO firm is more likely to obtain the mandate to lead the IPO because of the lower information costs implied by less distance. The first-stage regression is:

$$(IBR_{MAIN} \text{ or } IBR_{ALT}) = \alpha_0 + \alpha_1 IV + \alpha_2 \text{Control variables} + YEAR + INDUSTRY + \varepsilon_1, \quad (7)$$

where *IV* represents the instrumental variable, measured by the reputation ranking of the closest IB to each IPO firm; two IB reputation variables and all control variables are as defined in Appendix IV; ε_1 represents the error term.

The second-stage regression is:

$$LNBHAR36 = \beta_0 + \beta_1 \times (\widehat{IBR}_{MAIN} \text{ or } \widehat{IBR}_{ALT}) + \beta_2 \text{Control variables} + YEAR + INDUSTRY + \varepsilon_2, \quad (8)$$

where the estimated value of $\widehat{IBR}_{MAIN}$ or $\widehat{IBR}_{ALT}$ is obtained using coefficients from the first-stage regression; the dependent variable and all control variables are as defined in Appendix IV; ε_2 represents the error term.

Panel A of Table 7 reports the standard 2SLS regression results, based on the main proxy for IB reputation (IBR_{MAIN}). Specifically, the first-stage regression results show that the instrumental variable of *IV* has a significantly positive effect on IBR_{MAIN} at the 5% level ($t\text{-stat} = 2.49$; $t\text{-stat} = 2.54$) in Regressions (9) and (11), respectively, during the pre- and post-reform periods, suggesting the existence of a self-selection bias. The standard Hausman (1978) test also rejects the exogeneity of IB reputation ($F = 11.936$, $p\text{-value} = 0.000$; $F = 11.714$, $p\text{-value} = 0.000$) at the 1% level. The adjusted R^2 of 0.273 and 0.284 imply the relatively strong explanatory power for the *total* first-stage model. To test whether this R^2 overstates the true explanatory power of *IV* in the first-stage regression, we also calculate the *partial* R^2 and *partial* $F\text{-stat}$ (F_p). A *partial* R^2 of 0.217 or 0.220 with a statistically significant $F\text{-stat}$ at the 1% level ($F_p = 12.148$, $p\text{-value} = 0.000$; $F_p = 11.584$, $p\text{-value} = 0.000$) indicates the decent strength of *IV* in the first-stage regression. In sum, our

¹⁵ Tian (2010) uses geographic location information about the entrepreneurial firm and the distance between the venture capital (VC) and the IPO firm.

¹⁶ We discover the addresses of the headquarters of all IPO firms and IBs from the listing prospectuses and the official websites of the Securities Association of China (SAC). The latitude and longitude coordinates to each headquarter are obtained from Google Earth. We calculate mileage between two pairs of latitudes and longitudes using the great circle distance formula (See details in Appendix B in Tian, 2011).

diagnostic tests confirm the reliability of results in the first-stage regression and the relatively strong explanatory power of the chosen instrumental variable.

<Table 7>

The second-stage regression results in Panel A of Table 7 also show statistically insignificant coefficients on $\widehat{IBR}_{MAIN}$ (t -stat = 0.39) in Regression (10), during the pre-reform period, and significantly positive coefficient on $\widehat{IBR}_{MAIN}$ at the 1% level (t -stat = 2.71) in Regression (12), during the post-reform period. Consistent results are presented in Panel B based on the alternative proxy for IB reputation (IBR_{ALT}), confirming that our previous results in Tables 4 and 6—IB reputation has no impact on the long-term stock performance of IPOs during the pre-reform period, but a significantly positive impact during the post-reform period—continue to hold true after controlling for the problem of endogeneity using the standard 2SLS estimation.

4.4.2. Heckman (1979) Two-Stage Procedure

We also employ the Heckman (1979) two-stage procedure to deal with the self-selection bias. In the first-stage regression, we use a *probit* model to estimate the probability that an issuer chooses a more prestigious IB. The first-stage probit regression (selection equation) is:

$$Prob(IB \text{ reputation}) = \alpha_0 + \alpha_1 IV + \alpha_2 \text{Control variables} + YEAR + INDUSTRY + \varepsilon_1, \quad (9)$$

where the binary dependent variable is set to 1 for IPOs managed by more prestigious IBs with a reputation ranking of the median value of IBR_{MAIN} or IBR_{ALT} or above, and 0 otherwise; IV represents the instrumental variable, measured by the reputation ranking of the closest IB to each IPO firm; IB reputation variables and all control variables are as defined in Appendix IV; ε_1 represents the error term.

The second-stage OLS regression includes the inverse Mills ratio (λ) derived from the first-stage regression as an additional regressor to correct for the self-selection bias.¹⁷ The second-stage OLS regression is:

$$LNBHAR36 = \beta_0 + \beta_1 (IBR_{MAIN} \text{ or } IBR_{ALT}) + \beta_2 \text{Control variables} + \beta_3 \lambda + YEAR + INDUSTRY + \varepsilon_2, \quad (10)$$

where λ represents the inverse Mills ratio, generated from the first-stage regression; the dependent variable, two IB reputation variables, and all control variables are as defined in Appendix IV; ε_2 represents the error term.

<Table 8>

Table 8 reports the Heckman (1979) two-stage results, based either on the main proxy (IBR_{MAIN} , in Panel A) or the alternative proxy (IBR_{ALT} , in Panel B) for IB reputation, again confirming our previous results. Specifically, in Panel A, the first-stage probit model suggests the presence of a self-selection bias. For

¹⁷ $\lambda_i = \phi(\gamma Z_i) / [1 - \Phi(\gamma Z_i)]$, where ϕ represents the standard normal density function; Φ represents the standard normal cumulative distribution function; γ represents the first-stage probit estimation of the selection equation; Z represents the corresponding explanatory variables in the probit regression.

example, the probability of matching with a more prestigious IB increases with the offering size and the fraction of state-owned shares by total shares outstanding of the IPO firm. The selection equation has reasonable explanatory power as evidenced by the McFadden R^2 of 0.263 and 0.254 in Regressions (17) and (19), respectively. In addition, the inverse Mills ratio (λ) in the second-stage OLS regression is significantly positive at the 5% level (t -stat = 2.46; t -stat = 2.50) in Regressions (18) and (20), respectively, implying the importance of taking the problem of endogeneity into account. The coefficients and statistical significances of other independent variables remain qualitatively similar to those presented in Table 6.

4.5. Correcting for the Cross-Sectional Correlations in Abnormal Returns

Finally, to address potential cross-sectional correlations in the event-time abnormal returns, we examine the calendar-time returns for IPOs with time-series t -statistics. First, we create a diversified portfolio including all available firms going public during the last three years in each calendar month from January 1994 to December 2013. We then segment all IPOs into Low and High *reputation* groups based on the median value of IBR_{MAIN} or IBR_{ALT} . The mean monthly abnormal return for each IPO group is adjusted using the reference portfolio benchmark. The final rows in Table 9 show statistically insignificant differences of mean monthly abnormal returns between Low and High *reputation* groups, 0.098% (t -stat = 0.70) or 0.084% (t -stat = 0.61), during the pre-reform period, while, during the post-reform period, the mean monthly abnormal return of IPOs in High *reputation* group is significantly higher than that of IPOs in Low *reputation* group by 0.303% (t -stat = 2.71) or 0.338% (t -stat = 2.83) at the 1% level.

<Tables 9 & 10>

In addition, we estimate the weighted least squares (WLS) regressions where observations are weighted by the square root of the number of IPOs in the portfolio (Gompers & Lerner, 2003). We report the WLS regression results in Table 10 using the Fama & French (1993) three-factor model (in Panel A) and the Carhart (1997) four-factor model (in Panel B). For example, Panel A shows that the difference of intercepts between Low and High *reputation* groups is statistically insignificant (t -stat = 0.51; t -stat = 0.42) during the pre-reform period, while the difference becomes statistically significant at 1% level (t -stat = 2.57; t -stat = 2.66) during the post-reform period. Similar results are presented in Panel B of Table 10, concluding that the calendar-time results are consistent with our previous event-time results.

5. Conclusions

This study examines the long-term stock performance of 1,749 IPOs in the China stock market over the period 1993 to 2010, with specific emphasis on the comparison of the impacts of IB reputation before and after the 2001 IPO allocation system reform. We develop two time-varying proxies for IB reputation based on the three-year moving average of the aggregate gross proceeds raised or the total number of IPOs managed by each IB in each calendar year. We find that IB reputation has no impact on the reference portfolio-adjusted three-year BHARs during the pre-reform period, but a significantly positive impact during the post-reform period. Our results are robust to various checks with the use of alternative methodological approaches, such as the standard 2SLS estimation and the Heckman (1979) two-stage

procedure in controlling for the problem of endogeneity (a potential self-selection bias) as well as the calendar-time portfolio approach in correcting for the cross-sectional correlations in abnormal returns.

Our results not only contribute to the finance literature by providing additional empirical evidence on differential relationship between IB reputation and IPO long-term stock performance in an emerging market context, but have important relevance to financial regulators and market practitioners. The 2001 allocation system reform is successful in providing Chinese IBs with more discretionary power in allocating and pricing IPOs, and helps improve IPO price performance in the long term. In addition, the observed significantly positive impact of IB reputation on the long-term stock performance of IPOs during the post-reform period is of interest to investors, in particular, to international practitioners, such as the QFIIs, that is, investing in IPOs managed by more prestigious IBs will generate more profits in the long term.

References

- Aharony, J., J. Lee, & T. J. Wong. (2000). Financial Packaging of IPO Firms in China. *Journal of Accounting Research*, 38, 103–126.
- Aharony, J., C. Lin, & M. P. Loeb. (1993). Initial Public Offerings, Accounting Choices, and Earnings Management. *Contemporary Accounting Research*, 10, 61–82.
- Barber, B., & J. D. Lyon. (1997). Detecting Long-Run Abnormal Stock Returns: The Empirical Power and Specification of Test Statistics. *Journal of Financial Economics*, 43, 341–372.
- Baron, D. P. (1982). A Model of the Demand for Investment Banking Advising and Distribution Services for New Issues. *Journal of Finance*, 37, 955–976.
- Beatty, R. P., & J. R. Ritter. (1986). Investment Banking, Reputation and the Underpricing of Initial Public Offerings. *Journal of Financial Economics*, 15, 213–232.
- Beatty, R. P., & I. Welch. (1996). Issuer Expenses and Legal Liability in Initial Public Offerings. *Journal of Law & Economics*, 39, 545–602.
- Booth, J. R., & R. Smith. (1986). Capital Raising, Underwriting and the Certification Process. *Journal of Financial Economics*, 15, 261–281.
- Boycko, M., A. Shleifer, & R. W. Vishny. (1996). A Theory of Privatization. *Economic Journal*, 106, 309–319.
- Brav, A., C. Geczy, & P. A. Gompers. (2000). Is the Abnormal Return Following Equity Issuances Anomalous? *Journal of Financial Economics*, 56, 209–249.
- Brav, A., & P. A. Gompers. (1997). Myth or Reality? The Long-Run Underperformance of Initial Public Offerings: Evidence from Venture and Nonventure Capital-Backed Companies. *Journal of Finance*, 52, 1791–1821.
- Carhart, M. M. (1997). On Persistence in Mutual Fund Performance. *Journal of Finance*, 52, 57–82.
- Carter, R. B., F. H. Dark, & A. K. Singh. (1998). Underwriter Reputation, Initial Returns, and the Long-Run Performance of IPO Stocks. *Journal of Finance*, 53, 285–311.
- Carter, R. B., & S. Manaster. (1990). Initial Public Offerings and Underwriter Reputation. *Journal of Finance*, 45, 1045–1068.
- Chan, K., A. J. Menkveld, & Z. Yang. (2008). Information Asymmetry and Asset Prices: Evidence from the China Foreign Share Discount. *Journal of Finance*, 63, 159–196.
- Chan, K., J. B. Wang, & K. C. Wei. (2004). Underpricing and Long-Term Performance of IPOs in China. *Journal of Corporate Finance*, 10, 409–430.
- Chemmanur, T., & P. Fulghieri. (1994). Investment Bank Reputation, Information Production, and Financial Intermediation. *Journal of Finance*, 49, 57–79.
- Chen, C., H. Shi, & H. Xu. (2013). Underwriter Reputation, Issuer Ownership, and Pre-IPO Earnings Management: Evidence from China. *Financial Management*, 42, 647–677.
- Clogg, C. C., E. Petkova, & A. Haritou. (1995). Statistical Methods for Comparing Regression Coefficients between Models. *American Journal of Sociology*, 100, 1261–1293.
- Cooney, J. W., H. K. Kato, & J. S. Schallheim. (2003). Underwriter Certification and Japanese Seasoned Equity Issues. *Review of Financial Studies*, 16, 949–982.
- Derrien, F., & K. L. Womack. (2003). Auctions vs. Bookbuilding and Control of Underpricing in Hot IPO Markets. *Review of Financial Studies*, 16, 31–61.
- Dong, M., J. -S., Michel, & J. A. Panders. (2011). Underwriter Quality and Long-Run IPO Performance. *Financial Management*, 40, 219–251.
- Dunbar, C. G. (2000). Factors Affecting Investment Bank Initial Public Offering Market Share. *Journal of Financial Economics*, 55, 3–41.
- Fama, E. F. (1998). Market Efficiency, Long-Term returns, and Behavioral Finance. *Journal of Financial Economics*, 49, 283–306.
- Fama, E. F., & K. R. French. (1993). Common Risk Factors in the Returns on Bonds and Stocks. *Journal of Financial Economics*, 33, 3–56.
- Fang, L. H. (2005). Investment Bank Reputation and the Price and Quality of Underwriting Services. *Journal of Finance*, 60, 2729–2761.
- Fernando, C. S., V. A. Gatchev, & P. A. Spindt. (2005). Wanna Dance? How Firms and Underwriters Choose Each Other. *Journal of Finance*, 60, 2437–2469.
- Gompers, P. A., & J. Lerner. (2003). The Really Long Run Performance of Initial Public Offerings: The Pre-Nasdaq Evidence. *Journal of Finance*, 58, 1355–1392.
- Habib, M. A., & A. P. Ljungqvist. (2001). Underpricing and Entrepreneurial Wealth Losses in IPOs: Theory and Evidence. *Review of Financial Studies*, 14, 433–458.
- Harvey, C. (1995). Predictable Risk and Returns in Emerging Markets. *Review of Financial Studies*, 8, 773–816.
- Hausman, J. A. (1978). Specification Tests in Econometrics. *Econometrica*, 46, 1251–1272.
- Heckman, J. J. (1979). Sample Selection Bias as a Specification Error. *Econometrica*, 47, 153–161.
- James, C. (1992). Relationship-Specific Assets and the Pricing of Underwriter Services. *Journal of Finance*, 47, 1865–1885.
- Jegadeesh, N., & S. Titman. (1993). Returns to Buying Winners and Selling Losers: Implications for Stock Market Efficiency. *Journal of Finance*, 48, 65–91.
- Jenkinson, T., & A. P. Ljungqvist. (2001). *Going Public: The Theory and Evidence on How Companies Raise Equity Finance*. 2nd ed. Oxford: Clarendon Press.
- Jo, H., Y. Kim, & M. S. Park. (2007). Underwriter Choice and Earnings Management: Evidence from Seasoned Equity Offerings. *Review of Accounting Studies*, 12, 23–59.
- Klein, A. (2002). Audit Committee, Board of Director Characteristics, and Earnings Management. *Journal of Accounting and Economics*, 33, 375–400.

- Lee, G., & R. W. Masulis. (2011). Do More Reputable Financial Institutions Reduce Earnings Management by IPO Issuers? *Journal of Corporate Finance*, 17, 982–1000.
- Levis, M. (2011). The Performance of Private Equity-Backed IPOs. *Financial Management*, 40, 253–277.
- Li, H., & L. Zhou. (2005). Political Turnover and Economic Performance: The Incentive Role of Personnel Control in China. *Journal of Public Economics*, 89, 1743–1762.
- Ljungqvist, A. P., T. Jenkinson, & W. J. Wilhelm. (2003). Global Integration in Primary Equity Markets: The Role of U.S. Banks and U.S. Investors. *Review of Financial Studies*, 16, 63–99.
- Loughran, T., & J. R. Ritter. (1995). The New Issues Puzzle. *Journal of Finance*, 50, 23–51.
- Loughran, T., & J. R. Ritter. (2004). Why Has IPO Underpricing Changed Over Time? *Financial Management*, 33, 5–37.
- Loughran, T., J. R. Ritter, & K. Rydqvist. (1994). Initial Public Offerings: International Insights. *Pacific-Basin Finance Journal*, 2, 165–199.
- Lyon, J. D., B. M. Barber, & C. L. Tsai. (1999). Improved Methods for Tests of Long Run Abnormal Stock Returns. *Journal of Finance*, 54, 165–201.
- Maskin, E., Y. Qian, & C. Xu. (2000). Incentives, Information, and Organizational Form. *Review of Economic Studies*, 67, 359–378.
- McCahery, J., & A. Schwienbacher. (2010). Bank Reputation in the Private Debt Market. *Journal of Corporate Finance*, 16, 498–515.
- Meggison, W. L., & K. Weiss. (1991). Venture Capitalist Certification in Initial Public Offerings. *Journal of Finance*, 46, 879–904.
- Michaely, R., & W. H. Shaw. (1994). The Pricing of Initial Public Offerings: Tests of Adverse-Selection and Signaling Theories. *Review of Financial Studies*, 7, 279–319.
- Mitchell, M. L., & E. Stafford. (2000). Managerial Decisions and Long-Term Stock Price Performance. *Journal of Business*, 73, 287–329.
- Perry, S., & T. Williams. (1994). Earnings Management Preceding Management Buyout Offers. *Journal of Accounting and Economics*, 18, 157–179.
- Ritter, J. R., & I. Welch. (2002). A Review of IPO Activity, Pricing and Allocations. *Journal of Finance*, 57, 1795–1828.
- Schenone, C. (2004). The Effects of Banking Relationships on the Firm's IPO Underpricing. *Journal of Finance*, 59, 2903–2958.
- Schultz, P. (2003). Pseudo Market Timing and the Long-Run Underperformance of IPOs. *Journal of Finance*, 58, 483–517.
- Slovin, M. B., M. E. Sushka, & K. W. L. Lai. (2000). Alternative Flotation Methods, Adverse Selection, and Ownership Structure: Evidence from Seasoned Equity Issuance in the U.K. *Journal of Financial Economics*, 57, 309–327.
- Su, C., & K. Bangassa. (2011). The Impact of Underwriter Reputation on Initial Returns and Long-Run Performance of Chinese IPOs. *Journal of International Financial Markets, Institutions and Money*, 21, 760–791.
- Su, C., & D. Brookfield. (2013). An Evaluation of the Impact of Stock Market Reforms on IPO Under-Pricing in China: The Certification Role of Underwriters. *International Review of Financial Analysis*, 28, 20–33.
- Teoh, S. H., I. Welch, & T. J. Wong. (1998). Earnings Management and the Underperformance of Seasoned Equity Offerings. *Journal of Financial Economics*, 50, 63–99.
- Tian, X. (2011). The Causes and Consequences of Venture Capital Stage Financing. *Journal of Financial Economics*, 101, 132–159.
- Wang, Q., T. J. Wong, & L. Xia. (2008). State Ownership, the Institutional Environment, and Auditor Choice: Evidence from China. *Journal of Accounting and Economics*, 46, 112–134.
- Yong, O. (2007). A Review of IPO Research in Asia: What's Next? *Pacific-Basin Finance Journal*, 15, 253–275.

Table 1: Distribution of IPOs by the Year of Issuing

Cohort year	Whole market		SHSE		SZSE	
	Gross proceeds	N	Gross proceeds	N	Gross proceeds	N
1993	31,658.68	97	20,700.41	53	10,958.27	44
1994	5,479.99	27	4,200.31	19	1,279.68	8
1995	3,332.12	14	1,935.85	8	1,396.27	6
1996	22,663.90	151	10,537.92	70	12,125.98	81
1997	65,263.03	171	28,009.64	76	37,253.39	95
1998	39,682.23	92	20,939.86	45	18,742.37	47
1999	45,133.97	81	19,605.87	36	25,528.10	45
2000	78,365.42	126	57,165.31	88	21,200.11	38
2001	57,814.20	64	57,814.20	64	--	--
2002	28,422.93	64	28,422.93	64	--	--
2003	42,047.06	65	42,047.06	65	--	--
2004	32,810.24	95	23,727.06	58	9,083.18	37
2005	5,763.07	15	2,854.54	3	2,908.53	12
2006	62,682.72	65	45,027.79	9	17,654.93	56
2007	223,594.70	106	194,077.46	14	29,517.24	92
2008	90,205.50	73	65,194.40	5	25,011.10	68
2009	159,949.39	106	98,226.43	8	61,722.96	98
2010	327,069.50	337	70,536.57	22	256,532.93	315
Pre-reform period	310,481.94	786	181,997.77	422	128,484.17	364
Post-reform period	1,011,456.71	963	609,025.84	285	402,430.87	678
Main Board	919,507.78	1,071	791,023.61	707	128,484.17	364
SME Board	297,712.15	524	--	--	297,712.15	524
ChiNext Board	104,718.72	154	--	--	104,718.72	154
Full sample	1,321,938.65	1,749	791,023.61	707	530,915.04	1,042

This table presents the distribution of the sample of 1,749 IPOs over the period 1993 to 2010, by the year of issuing, in terms of the raised aggregate gross proceeds and the total number of IPOs. The gross proceeds are presented in millions of RMB, adjusted using CPI (2005 = 100). RMB 1.00 was approximately USD 0.1239 on December 31, 2005. The whole sample consists of 786 IPOs issued during the pre-reform period and 963 IPOs issued during the post-reform period.

Table 2: Descriptive Statistics and Pearson Correlations for All Variables

Panel A: Descriptive statistics									
	<i>BHAR36</i>	<i>IBR_{MAIN}</i>	<i>IBR_{ALT}</i>	<i>IR</i>	<i>LAG</i>	<i>AGE</i>	<i>SIZE</i>	<i>STATE</i>	<i>MARKET</i>
Pre-reform period									
Mean	-4.440	6.866	5.736	142.960	59.280	1.919	395.015	46.649	4.028
Median	-0.008	7.694	4.500	117.079	28.000	1.341	280.435	53.580	2.401
Min.	-446.615	1.447	0.333	-130.138	7.000	0.378	21.360	0	-14.944
Max.	210.500	10.000	18.000	3512.634	1,951.000	11.819	8,390.934	88.084	47.591
St. Dev.	47.687	2.491	4.714	174.898	150.269	2.159	478.764	25.189	8.134
Post-reform period									
Mean	6.430	6.142	4.776	86.563	14.025	5.611	1,050.318	18.219	1.218
Median	-8.768	6.695	2.708	63.670	14.000	4.556	447.567	0	1.046
Min.	-507.279	1.389	0.333	-11.221	7.000	0.192	89.146	0	-18.128
Max.	2,184.081	10.000	19.667	525.752	50.000	26.334	62,851.072	86.286	22.383
St. Dev.	124.511	2.191	4.963	82.474	4.618	3.911	3,677.965	26.942	6.163
Panel B: Pearson correlation coefficients									
	<i>LNBHAR36</i>	<i>IBR_{MAIN}</i>	<i>IBR_{ALT}</i>	<i>IR</i>	<i>LNLAG</i>	<i>LN(AGE +1)</i>	<i>LNSIZE</i>	<i>STATE</i>	<i>MARKET</i>
Correlation matrix for IPOs issued during the pre-reform period in the upper triangle									
<i>LNBHAR36</i>	1	0.054	0.077	-0.059	-0.026	0.026	0.090	0.111	0.073
<i>IBR_{MAIN}</i>	0.043	1	0.732	-0.070	-0.101	0.145	0.207	0.150	0.147
<i>IBR_{ALT}</i>	0.051	0.573	1	-0.031	-0.104	0.211	0.078	0.163	0.131
<i>IR</i>	-0.041	-0.185	-0.177	1	0.284	-0.054	-0.344	-0.091	0.093
<i>LNLAG</i>	-0.009	-0.074	-0.199	0.284	1	-0.214	-0.020	-0.0139	-0.127
<i>LN(AGE +1)</i>	0.021	0.013	0.070	-0.054	-0.133	1	0.098	0.414	0.180
<i>LNSIZE</i>	0.026	0.326	0.184	-0.344	-0.226	0.031	1	0.254	0.197
<i>STATE</i>	0.030	0.071	0.215	-0.091	-0.191	0.195	0.170	1	0.080
<i>MARKET</i>	0.052	0.091	0.012	0.093	-0.128	0.139	0.038	0.043	1
Correlation matrix for IPOs issued during the post-reform period in the lower triangle									

This table presents descriptive statistics (in Panel A) and Pearson correlation coefficients (in Panel B) for all variables, during the pre- and post-reform periods. The whole sample consists of 786 IPOs issued during the pre-reform period and 963 IPOs issued during the post-reform period. *SIZE* is presented in millions of RMB, adjusted using CPI (2005 = 100), while *BHAR36*, *IR*, *STATE*, and *MARKET* are presented in percentage. All variables are as defined in Appendix IV.

Table 3: IPO Long-Term Stock Performance

Event month	Pre-reform period					Post-reform period				
	N	$BHR_{i,T}$	$BHR_{p,T}$	$BHAR_T$	$t_{sa}(\overline{BHAR}_T)$	N	$BHR_{i,T}$	$BHR_{p,T}$	$BHAR_T$	$t_{sa}(\overline{BHAR}_T)$
3	786	2.173	2.275	-0.101	(-0.13)	963	-5.676	-4.623	-1.053	(-0.96)
6	786	9.233	10.049	-0.816	(-0.99)	963	-5.432	-6.654	1.222	(1.16)
9	786	13.657	14.947	-1.289	(-1.28)	963	-5.828	-7.310	1.482	(1.27)
12 (1 year)	786	17.253	18.960	-1.707	(-1.74)*	963	-7.469	-9.362	1.892	(1.38)
15	786	18.235	20.597	-2.363	(-1.90)*	963	-10.002	-12.774	2.772	(1.46)
18	786	21.952	24.601	-2.649	(-1.91)*	963	-12.779	-16.281	3.502	(1.66)*
21	786	27.473	30.424	-2.951	(-2.27)**	963	-15.351	-19.349	3.998	(1.89)*
24 (2 years)	786	31.184	34.245	-3.061	(-2.29)**	963	-16.139	-20.466	4.326	(2.01)**
27	786	34.349	38.160	-3.811	(-2.36)**	963	-10.383	-15.008	4.625	(2.15)**
30	786	37.581	41.555	-3.974	(-2.39)**	963	0.177	-5.049	5.226	(2.41)**
33	786	46.363	50.531	-4.168	(-2.42)**	963	11.176	5.296	5.880	(2.61)***
36 (3 years)	786	55.933	60.373	-4.440	(-2.59)***	963	20.797	14.367	6.430	(2.75)***

This table presents the equal-weighted reference portfolio-adjusted BHARs of IPOs issued during the pre-reform period and IPOs issued during the post-reform period, over a period of 36 event months after listing, excluding the initial returns. Each IPO firm in the sample is matched to a reference portfolio based on the existing listed firms classified with similar size and B/M as well as within the same industry category, according to the two-digit ICB codes. The whole sample consists of 786 IPOs issued during the pre-reform period and 963 IPOs issued during the post-reform period.

The average annual number of trading days over the period 1993 to 2010 in the China stock market is 242, with an average of 20 trading days per month. So an event month is defined as a 20-trading-day interval following the first trading day. The initial return period is defined to be month 0; month 1 consists of event days 2–21; month 2 consists of event days 22–41, and so forth.

Following the calculations proposed by Loughran & Ritter (1995), we define the reference portfolio-adjusted $BHAR_{i,T}$ on the IPO i for a holding period of T months as: $BHAR_{i,T} = BHR_{i,T} - BHR_{p,T} = [\prod_{t=1}^T (1 + R_{i,t}) - 1] - [\prod_{t=1}^T (1 + R_{p,t}) - 1]$, where $R_{i,t}$ and $R_{p,t}$ are the monthly returns on IPO i and its reference portfolio, respectively, in event month t following listing; $BHR_{i,T}$ and $BHR_{p,T}$ are the buy-and-hold returns on IPO i and its reference portfolio, respectively. The equal-weighted reference portfolio-adjusted $\overline{BHAR}_T$ on N IPOs for a holding period T months is computed as: $\overline{BHAR}_T = \frac{1}{N} \sum_{i=1}^N BHAR_{i,T}$.

The bootstrapped skewness-adjusted t -statistics (t_{sa}) are used to evaluate the significance of $\overline{BHAR}_T$: $t_{sa}(\overline{BHAR}_T) = \sqrt{N} \left(S + \frac{1}{3} \hat{\gamma} S^2 + \frac{1}{6N} \hat{\gamma} \right)$, where $S = \frac{\overline{BHAR}_T}{\sigma(\overline{BHAR}_T)}$ and $\hat{\gamma} = \frac{\sum_{i=1}^N (BHAR_{i,T} - \overline{BHAR}_T)^3}{N \sigma(\overline{BHAR}_T)^3}$, where $\hat{\gamma}$ is the estimation of the coefficient of skewness. Like Lyon et al. (1999), we draw 1,000 bootstrapped re-samples from the original sample size, $n_b = N/4$, where N is the original sample size for the calculation of the long-term stock performance of IPOs, and b is the draw from 1 to 1,000. For each re-sample, t_{sa} is recalculated using the smaller sample of n_b , in place of N . All returns are presented in percentage and t -statistics are reported in parentheses. *, **, and *** denote statistical significance at the 10, 5, and 1 levels, respectively.

Table 4: Univariate Analysis Results

	Pre-reform period				Post-reform period			
	N	Mean	Median	St. Dev.	N	Mean	Median	St. Dev.
Panel A: Main proxy for IB reputation (IBR_{MAIN})								
Low IBR_{MAIN} 30	236	-4.127	-4.037	57.822	289	-0.556	-0.996	9.228
Medium IBR_{MAIN} 40	314	-4.479	-3.525	46.401	385	7.476	8.452	77.730
High IBR_{MAIN} 30	236	-4.700	-4.156	36.243	289	12.023	12.834	104.284
Difference between High and Low		0.573	0.119			12.579	13.830	
t -stat		(1.24)	(1.09)			(3.43)***	(2.82)***	
Kruskal-Wallis χ^2		(1.64)	(1.43)			(19.25)***	(15.40)***	
Panel B: Alternative proxy for IB reputation (IBR_{ALT})								
Low IBR_{ALT} 30	236	-4.041	-4.130	46.859	289	-1.293	-1.335	10.755
Medium IBR_{ALT} 40	314	-4.464	-4.317	52.279	385	7.672	8.645	81.315
High IBR_{ALT} 30	236	-4.806	-4.509	41.161	289	12.499	13.604	135.840
Difference between High and Low		0.765	0.379			13.792	14.939	
t -stat		(1.13)	(1.05)			(4.06)***	(3.26)***	
Kruskal-Wallis χ^2		(1.44)	(1.24)			(22.01)***	(16.06)***	

This table presents the univariate analysis results of the long-term stock performance of IPOs issued during the pre- and post-reform periods. The long-term stock performance of IPOs is calculated as the equal-weighted reference portfolio-adjusted three-year BHARs. Each IPO firm in the sample is matched to a reference portfolio based on the existing listed firms classified with similar size and B/M as well as within the same industry category, according to the two-digit ICB codes. The whole sample consists of 786 IPOs issued during the pre-reform period and 963 IPOs issued during the post-reform period. During the pre- and post-reform periods, all IPOs are sorted by IBR_{MAIN} (in Panel A) or IBR_{ALT} (in Panel B) into three *reputation* groups: Low, Medium, or High, according to whether the value of IBR_{MAIN} or IBR_{ALT} is included in the lowest 30, middle 40, or highest 30 percentile. IBR_{MAIN} and IBR_{ALT} represent the three-year moving average ($t-3$, $t-2$, $t-1$) of the aggregate gross proceeds raised and the total number of IPOs managed, respectively, by each IB in each calendar year t , over the sample period. The mean and median BHARs of IPOs and the standard deviation (St. Dev.) are displayed in percentage and t -statistics are reported in parentheses. Both parametric (t -stat) and non-parametric test statistics (Kruskal-Wallis χ^2) are employed to test the differences of mean returns between the Low and High *reputation* groups. *** denotes statistical significance at the 1 level.

Table 5: Regional Analysis Results

	N	Mean	High	Low	High – Low	<i>t</i> -stat	Kruskal–Wallis χ^2
Panel A: Main proxy for IB reputation (IBR_{MAIN})							
Pre-reform period							
IPO firms and their IBs in the same regions	254	–1.193	–0.166	–2.221	2.055	(1.90)*	(2.86)*
IPO firms and their IBs in the different regions	532	–5.990	–5.764	–6.216	0.452	(1.06)	(1.79)
Post-reform period							
IPO firms and their IBs in the same regions	197	7.086	9.729	4.443	5.286	(2.72)***	(16.92)***
IPO firms and their IBs in the different regions	766	6.261	8.806	3.717	5.089	(2.64)***	(13.50)***
Panel B: Alternative proxy for IB reputation (IBR_{ALT})							
Pre-reform period							
IPO firms and their IBs in the same regions	254	–1.193	–0.144	–2.242	2.098	(1.75)*	(2.72)*
IPO firms and their IBs in the different regions	532	–5.990	–5.600	–6.380	0.780	(0.91)	(2.33)
Post-reform period							
IPO firms and their IBs in the same regions	197	7.086	9.475	4.697	4.778	(3.41)***	(22.44)***
IPO firms and their IBs in the different regions	766	6.261	8.931	3.591	5.340	(2.82)***	(17.12)***

This table presents the regional analysis results of the long-term stock performance of IPOs issued during the pre- and post-reform periods. The long-term stock performance of IPOs is calculated as the equal-weighted reference portfolio-adjusted three-year BHARs. Each IPO firm in the sample is matched to a reference portfolio based on the existing listed firms classified with similar size and B/M as well as within the same industry category, according to the two-digit ICB codes. The whole sample consists of 786 IPOs issued during the pre-reform period and 963 IPOs issued during the post-reform period. During the pre- and post-reform periods, all IPOs are divided into two *region* groups, according to whether IPO firms and their IBs are located in the same or different regions. In each regional group, all IPO firms are sorted by IBR_{MAIN} (in Panel A) or IBR_{ALT} (in Panel B) into two *reputation* groups: Low or High, based on the median value of IBR_{MAIN} or IBR_{ALT} . IBR_{MAIN} and IBR_{ALT} represent the three-year moving average ($t-3$, $t-2$, $t-1$) of the aggregate gross proceeds raised and the total number of IPOs managed, respectively, by each IB in each calendar year t , over the sample period. The mean BHARs of IPOs are displayed in percentage and *t*-statistics are reported in parentheses. Both parametric (*t*-stat) and non-parametric test statistics (Kruskal–Wallis χ^2) are employed to test the differences of mean returns between the Low and High *reputation* groups for each *region* group. * and *** denote statistical significance at the 10 and 1 levels, respectively.

Table 6: OLS Regression Results

	Pre-reform period				Post-reform period			
	Coefficient	<i>t</i> -stat	Coefficient	<i>t</i> -stat	Coefficient	<i>t</i> -stat	Coefficient	<i>t</i> -stat
Panel A: Using an whole sample of 1,749 IPOs on the SHSE and SZSE								
	Regression (1)		Regression (2)		Regression (3)		Regression (4)	
Intercept	2.174		2.141		2.290		2.277	
<i>IBR_{MAIN}</i>	0.013	(0.15)			0.055	(2.90)***		
<i>IBR_{ALT}</i>			0.026	(0.88)			0.061	(3.04)***
<i>IR</i>	−0.017	(−1.90)*	−0.019	(−1.92)*	−0.012	(−1.88)*	−0.015	(−1.87)*
<i>LNLAG</i>	−0.030	(−2.95)***	−0.033	(−2.84)***	−0.006	(−0.40)	−0.005	(−0.58)
<i>LN(AGE +1)</i>	0.006	(1.63)	0.007	(1.57)	0.008	(1.15)	0.009	(1.10)
<i>LNSIZE</i>	0.015	(2.13)**	0.016	(2.08)**	0.009	(1.61)	0.008	(1.83)*
<i>STATE</i>	0.027	(2.73)***	0.030	(2.63)***	0.010	(0.56)	0.017	(0.77)
<i>MARKET</i>	0.029	(1.24)	0.034	(1.28)	0.080	(1.32)	0.093	(1.35)
<i>YEAR</i>	YES		YES		YES		YES	
<i>INDUSTRY</i>	YES		YES		YES		YES	
<i>Adj. R²</i>	0.069		0.064		0.211		0.216	
Panel B: Using a sub-sample of 707 IPOs on the SHSE								
	Regression (5)		Regression (6)		Regression (7)		Regression (8)	
Intercept	2.118		2.120		2.242		2.215	
<i>IBR_{MAIN}</i>	0.029	(0.27)			0.054	(2.66)***		
<i>IBR_{ALT}</i>			0.021	(0.44)			0.060	(2.65)***
<i>IR</i>	−0.018	(−1.93)*	−0.016	(−1.93)*	−0.015	(−1.38)	−0.016	(−1.41)
<i>LNLAG</i>	−0.032	(−2.12)**	−0.027	(−2.29)**	−0.005	(−0.25)	−0.009	(−0.60)
<i>LN(AGE +1)</i>	0.006	(1.59)	0.008	(1.57)	0.017	(1.60)	0.020	(1.57)
<i>LNSIZE</i>	0.019	(2.27)**	0.021	(2.17)**	0.004	(1.37)	0.006	(1.55)
<i>STATE</i>	0.018	(1.55)	0.020	(1.55)	0.037	(1.21)	0.039	(1.25)
<i>MARKET</i>	0.024	(0.66)	0.027	(1.22)	0.062	(0.76)	0.060	(0.78)
<i>YEAR</i>	YES		YES		YES		YES	
<i>INDUSTRY</i>	YES		YES		YES		YES	
<i>Adj. R²</i>	0.081		0.089		0.194		0.186	

This table presents the OLS regression results on the long-term stock performance of IPOs issued during the pre- and post-reform periods. The results presented in Panels A are based on the whole sample of 1,749 IPOs either on the SHSE or SZSE, while the results presented in Panel B are based on the sub-sample of 707 IPOs on the SHSE. The long-term stock performance of IPOs is calculated as the equal-weighted reference portfolio-adjusted three-year BHARs. Each IPO firm in the sample is matched to a reference portfolio based on the existing listed firms classified with similar size and B/M as well as within the same industry category, according to the two-digit ICB codes. The whole sample consists of 786 IPOs issued during the pre-reform period and 963 IPOs issued during the post-reform period. All variables are as defined in Appendix IV. We also control for the potential year and industry fixed effects using indicator variables for years and industries, according to the two-digit ICB codes. The White heteroscedasticity-consistent *t*-statistics are reported in parentheses. *, **, and *** denote statistical significance at the 10, 5, and 1 levels, respectively.

Table 7: 2SLS Regression Results

	Pre-reform period				Post-reform period			
	First-stage regression		Second-stage regression		First-stage regression		Second-stage regression	
	Coefficient	<i>t</i> -stat	Coefficient	<i>t</i> -stat	Coefficient	<i>t</i> -stat	Coefficient	<i>t</i> -stat
Panel A: Main proxy for IB reputation (<i>IBR</i> _{MAIN})								
	Regression (9)		Regression (10)		Regression (11)		Regression (12)	
Intercept	5.065		2.124		5.186		2.172	
<i>IBR</i> _{MAIN}			0.014 (0.39)				0.064 (2.71)***	
<i>IV</i>	0.526	(2.49)**			0.554	(2.54)**		
<i>IR</i>	−0.030	(−0.55)	−0.006	(−1.91)*	−0.084	(−0.81)	−0.017	(−1.33)
<i>LNLAGE</i>	−0.137	(−1.18)	−0.004	(−2.13)**	−0.122	(−0.86)	−0.005	(−0.42)
<i>LN(AGE +1)</i>	0.103	(0.81)	0.006	(1.40)	0.049	(0.41)	0.012	(0.96)
<i>LNSIZE</i>	0.858	(2.30)**	0.013	(2.29)**	0.820	(2.39)**	0.005	(0.80)
<i>STATE</i>	0.909	(2.25)**	0.026	(2.42)**	0.054	(0.18)	0.006	(0.85)
<i>MARKET</i>	0.533	(1.01)	0.025	(1.27)	0.440	(0.92)	0.066	(1.14)
<i>YEAR</i>	YES		YES		YES		YES	
<i>INDUSTRY</i>	YES		YES		YES		YES	
<i>Adj. R</i> ²	0.273		0.064		0.284		0.293	
<i>Partial R</i> ²	0.217				0.220			
<i>Partial F</i> -stat	<i>F</i> _{<i>p</i>} = 12.148 (<i>p</i> -value = 0.000)				<i>F</i> _{<i>p</i>} = 11.584 (<i>p</i> -value = 0.000)			
Hausman test	<i>F</i> = 11.936 (<i>p</i> -value = 0.000)				<i>F</i> = 11.714 (<i>p</i> -value = 0.000)			
Panel B: Alternative proxy for IB reputation (<i>IBR</i> _{ALT})								
	Regression (13)		Regression (14)		Regression (15)		Regression (16)	
Intercept	5.319		2.152		5.436		2.147	
<i>IBR</i> _{ALT}			0.025 (0.71)				0.072 (2.91)***	
<i>IV</i>	0.531	(2.48)**			0.560	(2.54)**		
<i>IR</i>	−0.096	(−0.96)	−0.005	(−1.91)*	−0.090	(−0.81)	−0.031	(−1.62)
<i>LNLAGE</i>	−0.047	(−0.59)	−0.004	(−2.08)**	−0.126	(−0.79)	−0.005	(−0.35)
<i>LN(AGE +1)</i>	0.060	(0.61)	0.007	(1.58)	0.046	(0.47)	0.015	(0.82)
<i>LNSIZE</i>	0.926	(1.80)*	0.016	(2.35)**	0.983	(2.45)**	0.006	(1.19)
<i>STATE</i>	0.988	(2.23)**	0.029	(2.58)***	0.057	(0.15)	0.007	(0.76)
<i>MARKET</i>	0.414	(0.87)	0.030	(1.16)	0.325	(0.42)	0.070	(1.49)
<i>YEAR</i>	YES		YES		YES		YES	
<i>INDUSTRY</i>	YES		YES		YES		YES	
<i>Adj. R</i> ²	0.271		0.059		0.287		0.345	
<i>Partial R</i> ²	0.197				0.207			
<i>Partial F</i> -stat	<i>F</i> _{<i>p</i>} = 13.125 (<i>p</i> -value = 0.000)				<i>F</i> _{<i>p</i>} = 12.984 (<i>p</i> -value = 0.000)			
Hausman test	<i>F</i> = 12.652 (<i>p</i> -value = 0.000)				<i>F</i> = 12.548 (<i>p</i> -value = 0.000)			

This table presents the 2SLS regression results on the long-term stock performance of IPOs issued during the pre- and post-reform periods. The long-term stock performance of IPOs is calculated as the equal-weighted reference portfolio-adjusted three-year BHARs. Each IPO firm in the sample is matched to a reference portfolio based on the existing listed firms classified with similar size and B/M as well as within the same industry category, according to the two-digit ICB codes. The whole sample consists of 786 IPOs issued during the pre-reform period and 963 IPOs issued during the post-reform period. The first-stage regressions use IBR_{MAIN} (in Panel A) or IBR_{ALT} (in Panel B) as the dependent variable. *IV* represents the instrumental variable of the reputation of the closest IB to each IPO firm. We also control for the potential year and industry fixed effects using indicator variables for years and industries, according to the two-digit ICB codes. The second-stage OLS regressions replicate Regressions (1–4) in Table 6 with the use of $LNBHAR36$ as the dependent variable, replacing IBR_{MAIN} or IBR_{ALT} with the predicted value of $\widehat{IBR}_{MAIN}$ or $\widehat{IBR}_{ALT}$ obtained with coefficients of the first-stage regression. All variables are as defined in Appendix IV. The White heteroscedasticity-consistent *t*-statistics are reported in parentheses. *, **, and *** denote statistical significance at the 10, 5, and 1 levels, respectively.

Table 8: Heckman (1979) Two-Stage Results

	Pre-reform period				Post-reform period			
	First-stage probit regression		Second-stage OLS regression		First-stage probit regression		Second-stage OLS regression	
	Coefficient	z-stat	Coefficient	t-stat	Coefficient	z-stat	Coefficient	t-stat
Panel A: Main proxy for IB reputation (IBR_{MAIN})								
	Regression (17)		Regression (18)		Regression (19)		Regression (20)	
Intercept	0.636		2.165		0.620		2.183	
IBR_{MAIN}			0.014	(0.48)			0.066	(2.78)***
IV	0.434	(2.37)**			0.560	(2.46)**		
IR	-0.016	(-0.48)	-0.005	(-1.85)*	-0.098	(-0.60)	-0.013	(-1.33)
$LNLAG$	-0.178	(-0.73)	-0.006	(-2.40)**	-0.151	(-0.78)	-0.005	(-0.28)
$LN(AGE+1)$	0.098	(0.51)	0.007	(1.54)	0.011	(0.17)	0.019	(1.24)
$LNSIZE$	0.332	(2.30)**	0.015	(2.22)**	0.551	(2.49)**	0.008	(0.86)
$STATE$	0.664	(2.37)**	0.027	(2.46)**	0.465	(1.84)*	0.010	(0.79)
$MARKET$	0.544	(0.96)	0.028	(1.21)	0.506	(0.86)	0.073	(1.17)
λ			0.802	(2.46)**			0.713	(2.50)**
$YEAR$	YES		YES		YES		YES	
$INDUSTRY$	YES		YES		YES		YES	
McFadden R^2	0.263		0.064		0.254		0.345	
Panel B: Alternative proxy for IB reputation (IBR_{ALT})								
	Regression (21)		Regression (22)		Regression (23)		Regression (24)	
Intercept	0.622		2.156		0.609		2.200	
IBR_{ALT}			0.023	(0.62)			0.075	(2.89)***
IV	0.466	(2.31)**			0.486	(2.27)**		
IR	-0.019	(-0.59)	-0.006	(-1.89)*	-0.050	(-0.81)	-0.014	(-1.36)
$LNLAG$	-0.188	(-0.81)	-0.004	(-2.27)**	-0.174	(-0.97)	-0.003	(-0.25)
$LN(AGE+1)$	0.052	(0.29)	0.007	(1.46)	0.009	(0.13)	0.015	(1.33)
$LNSIZE$	0.286	(2.48)**	0.016	(2.28)**	0.287	(2.11)**	0.011	(0.69)
$STATE$	0.493	(2.36)**	0.025	(2.32)**	0.082	(1.82)*	0.018	(1.19)
$MARKET$	0.709	(1.13)	0.030	(1.20)	0.465	(0.76)	0.087	(1.29)
λ			0.710	(2.36)**			0.676	(2.48)**
$YEAR$	YES		YES		YES		YES	
$INDUSTRY$	YES		YES		YES		YES	
McFadden R^2	0.265		0.054		0.262		0.357	

This table presents the Heckman (1979) two-stage results on the long-term stock performance of IPOs issued during the pre- and post-reform periods. The long-term stock performance of IPOs is calculated as the equal-weighted reference portfolio-adjusted three-year BHARs. Each IPO firm in the sample is matched to a reference portfolio based on the existing listed firms classified with similar size and B/M as well as within the same industry category, according to the two-digit ICB codes. The whole sample consists of 786 IPOs issued during the pre-reform period and 963 IPOs issued during the post-reform period. In the first-stage regression, we use a probit model to estimate the probability that an issuer to choose a more prestigious IB. The binary dependent variable is set to 1 for IPOs managed by more prestigious IBs with a reputation ranking of the median value of IBR_{MAIN} (in Panel A) or IBR_{ALT} (in Panel B) or above, and 0 otherwise. IV represents the instrumental variable, measured by the reputation ranking of the closest IB to each IPO firm. We also control for the potential year and industry fixed effects using indicator variables for years and industries, according to the two-digit ICB codes. The second-stage OLS regression includes the inverse Mills ratio (λ) derived from the first-stage regression as an additional regressor to correct for the self-selection bias. $\lambda_i = \phi(\gamma Z_i) / [1 - \Phi(\gamma Z_i)]$, where ϕ represents the standard normal density function; Φ represents the standard normal cumulative distribution function; γ represents the first-stage probit estimation of the selection equation; Z represents the corresponding explanatory variables in the probit regression. All variables are as defined in Appendix IV. The White heteroscedasticity-consistent t -statistics are reported in parentheses. *, **, and *** denote statistical significance at the 10, 5, and 1 levels, respectively.

Table 9: Calendar-Time Abnormal Returns

Cohort year	Full sample	Main proxy for IB reputation (IBR_{MAIN})			Alternative proxy for IB reputation (IBR_{ALT})		
		Low	High	High – Low	Low	High	High – Low
1994	–3.379	–3.755	–3.003	0.752	–3.704	–3.054	0.650
1995	0.668	0.475	0.861	0.386	0.485	0.851	0.366
1996	–0.556	–0.226	–0.886	–0.660	–0.220	–0.893	–0.673
1997	–0.394	–0.594	–0.195	0.399	–0.509	–0.280	0.229
1998	0.829	0.935	0.723	–0.212	0.840	0.818	–0.022
1999	–0.003	–0.042	0.036	0.078	–0.035	0.030	0.065
2000	1.749	1.857	1.642	–0.215	1.863	1.635	–0.228
2001	0.501	0.416	0.585	0.169	0.401	0.601	0.200
2002	–0.648	–0.667	–0.628	0.039	–0.795	–0.500	0.295
2003	–2.013	–2.338	–1.687	0.651	–2.429	–1.596	0.833
2004	0.443	0.31	0.576	0.266	0.285	0.601	0.316
2005	0.199	0.086	0.312	0.226	0.084	0.314	0.230
2006	–0.364	–0.553	–0.175	0.378	–0.527	–0.202	0.325
2007	0.089	0.015	0.164	0.149	–0.072	0.251	0.323
2008	1.541	1.34	1.743	0.403	1.247	1.836	0.589
2009	2.22	2.073	2.367	0.294	2.068	2.372	0.304
2010	1.396	1.236	1.555	0.319	1.308	1.484	0.176
2011	0.024	–0.078	0.126	0.204	–0.229	0.277	0.506
2012	0.257	0.236	0.277	0.041	0.229	0.284	0.055
2013	2.188	2.071	2.305	0.234	2.019	2.272	0.253
Pre-reform period	–0.107	–0.156	–0.058	0.098	–0.149	–0.065	0.084
<i>t</i> -stat	(–0.76)	(–0.95)	(–0.68)	(0.70)	(–1.00)	(–0.74)	(0.61)
Post-reform period	0.433	0.282	0.585	0.303	0.256	0.594	0.338
<i>t</i> -stat	(3.81)***	(1.81)*	(4.17)***	(2.71)***	(1.69)*	(4.31)***	(2.83)***

This table presents the mean monthly abnormal returns on the portfolio including the whole sample of IPOs that went public on the SHSE or SZSE in the last three years, in each calendar year over the period January 1994 to December 2013. Each IPO firm in the sample is matched to a reference portfolio based on the existing listed firms classified with similar size and B/M as well as within the same industry category, according to the two-digit ICB codes. The whole sample consists of 786 IPOs issued during the pre-reform period and 963 IPOs issued during the post-reform period. The median value of IBR_{MAIN} or IBR_{ALT} is used to segment all IPOs in to two groups: Low and High *reputation* groups. IBR_{MAIN} and IBR_{ALT} represent the three-year moving average ($t-3$, $t-2$, $t-1$) of the aggregate gross proceeds raised and the total number of IPOs managed, respectively, by each IB in each calendar year t , over the sample period. The final rows report the mean monthly abnormal returns of the portfolio including IPOs issued during the pre- and post-reform periods. All returns are displayed in percentage and *t*-statistics, reported in parentheses, are calculated using the time-series standard deviation of the mean monthly abnormal returns. * and *** denote statistical significance at the 10 and 1 levels, respectively.

Table 10: Calendar-Time WLS Regression Returns

		Main proxy for IB reputation (IBR_{MAIN})				Alternative proxy for IB reputation (IBR_{ALT})		
		Full sample	Low	High	High – Low	Low	High	High – Low
Panel A: Fama & French (1993) three-factor model								
Pre-reform period								
Intercept	Coefficient	−0.091	−0.120	−0.036	0.084	−0.116	−0.040	0.076
	<i>t</i> -stat	(−0.64)	(−0.86)	(−0.39)	(0.51)	(−0.88)	(−0.54)	(0.42)
$R_{m,t} - R_{f,t}$	Coefficient	0.498	0.472	0.551	0.079	0.460	0.532	0.072
	<i>t</i> -stat	(2.53)**	(2.55)**	(2.65)**	(0.33)	(2.46)**	(2.64)**	(0.25)
SMB_t	Coefficient	0.618	0.608	0.740	0.132	0.603	0.731	0.128
	<i>t</i> -stat	(2.03)**	(2.24)**	(2.43)**	(0.24)	(2.27)**	(2.49)**	(0.20)
HML_t	Coefficient	−0.220	−0.235	−0.171	0.064	−0.227	−0.161	0.066
	<i>t</i> -stat	(−0.64)	(−0.57)	(−0.51)	(0.07)	(−0.58)	(−0.54)	(0.09)
<i>Adj. R</i> ²		0.149	0.151	0.165	0.053	0.156	0.147	0.051
Post-reform period								
Intercept	Coefficient	0.392	0.222	0.484	0.262	0.213	0.488	0.275
	<i>t</i> -stat	(2.84)**	(1.82)*	(3.29)**	(2.57)**	(1.76)*	(3.37)**	(2.66)**
$R_{m,t} - R_{f,t}$	Coefficient	0.554	0.534	0.567	0.033	0.532	0.566	0.034
	<i>t</i> -stat	(2.68)**	(2.65)**	(2.72)**	(0.31)	(2.44)**	(2.66)**	(0.35)
SMB_t	Coefficient	0.623	0.575	0.654	0.079	0.576	0.642	0.066
	<i>t</i> -stat	(2.60)**	(2.56)**	(2.61)**	(0.46)	(2.59)**	(2.64)**	(0.42)
HML_t	Coefficient	−0.238	−0.253	−0.221	0.032	−0.278	−0.232	0.046
	<i>t</i> -stat	(−0.81)	(−0.44)	(−0.55)	(0.09)	(−0.86)	(−0.73)	(0.09)
<i>Adj. R</i> ²		0.154	0.158	0.165	0.158	0.164	0.158	0.147
Panel B: Carhart (1997) four-factor model								
Pre-reform period								
Intercept	Coefficient	−0.089	−0.118	−0.031	0.087	−0.092	−0.034	0.058
	<i>t</i> -stat	(−0.70)	(−0.73)	(−0.28)	(0.69)	(−0.78)	(−0.53)	(0.39)
$R_{m,t} - R_{f,t}$	Coefficient	0.451	0.432	0.465	0.033	0.439	0.474	0.035
	<i>t</i> -stat	(2.31)**	(2.06)**	(2.28)**	(0.17)	(2.22)**	(2.42)**	(0.18)
SMB_t	Coefficient	0.622	0.613	0.634	0.021	0.612	0.633	0.021
	<i>t</i> -stat	(2.24)**	(2.24)**	(2.36)**	(0.21)	(2.14)**	(2.22)**	(0.22)
HML_t	Coefficient	−0.223	−0.230	−0.203	0.027	−0.237	−0.215	0.022
	<i>t</i> -stat	(−0.56)	(−0.62)	(−0.75)	(0.06)	(−0.48)	(−0.65)	(0.07)
WML_t	Coefficient	0.231	0.214	0.273	0.059	0.216	0.268	0.052
	<i>t</i> -stat	(0.98)	(0.88)	(0.73)	(0.22)	(0.87)	(0.86)	(0.21)
<i>Adj. R</i> ²		0.159	0.161	0.172	0.059	0.164	0.153	0.058
Post-reform period								
Intercept	Coefficient	0.386	0.212	0.461	0.249	0.204	0.471	0.267
	<i>t</i> -stat	(2.81)**	(1.75)**	(3.04)**	(2.51)**	(1.68)*	(3.16)**	(2.58)**
$R_{m,t} - R_{f,t}$	Coefficient	0.546	0.515	0.549	0.034	0.445	0.465	0.020
	<i>t</i> -stat	(2.43)**	(2.24)**	(2.53)**	(0.35)	(2.45)**	(2.53)**	(0.30)
SMB_t	Coefficient	0.623	0.587	0.651	0.064	0.566	0.633	0.067
	<i>t</i> -stat	(2.47)**	(2.44)**	(2.54)**	(0.15)	(2.23)**	(2.44)**	(0.33)
HML_t	Coefficient	−0.251	−0.255	−0.244	0.011	−0.265	−0.243	0.022
	<i>t</i> -stat	(−0.83)	(−0.76)	(−0.56)	(0.05)	(−0.98)	(−0.77)	(0.11)
WML_t	Coefficient	0.221	0.214	0.224	0.010	0.212	0.223	0.011
	<i>t</i> -stat	(0.88)	(0.64)	(0.67)	(0.04)	(0.79)	(0.89)	(0.08)
<i>Adj. R</i> ²		0.159	0.164	0.169	0.161	0.176	0.168	0.154

This table presents the results based on the Fama & French (1993) three-factor model (in Panel A) and the Carhart (1997) four-factor model (in Panel B), during the pre- and post-reform periods. The whole sample consists of 786 IPOs issued during the pre-reform period and 963 IPOs issued during the post-reform period. The WLS regressions are used where observations are weighted by the square root of the number of IPOs in the portfolio. The portfolio in each month t from January 1994 to December 2013 includes the whole sample of IPOs that went public on the SHSE or SZSE during the last three years. The differences between the monthly returns on a portfolio of IPOs and the risk-free rate ($R_{p,t} - R_{f,t}$) are regressed on the value-weighted return on the SHSE and SZSE A-Share Indices in month t , in excess of the risk-free rate ($R_{m,t} - R_{f,t}$), on the difference in monthly returns between portfolios of big and small-sized stocks (SMB_t), on the difference in monthly returns between portfolios of high and low B/M stocks (HML_t), and on the difference in monthly returns between portfolios of past winner and loser stocks (WML_t). The median value of IBR_{MAIN} or IBR_{ALT} is used to segment all IPOs into two groups: Low and High reputation groups. IBR_{MAIN} and IBR_{ALT} represent the three-year moving average ($t-3$, $t-2$, $t-1$) of the aggregate gross proceeds raised and the total number of IPOs managed, respectively, by each IB in each calendar year t , over the sample period. The *t*-statistics are presented in parentheses. *, **, and *** denote statistical significance at the 10, 5, and 1 levels, respectively.

Figure 1a: Long-Term Stock Performance of IPOs Managed by IBs with High and Low Reputation, Proxied by IBR_{MAIN} , in Terms of the Year of Issuing, Over the Period 1993 to 2010

Figure 1b: Long-Term Stock Performance of IPOs Managed by IBs with High and Low Reputation, Proxied by IBR_{ALT} , in Terms of the Year of Issuing, Over the Period 1993 to 2010

The long-term stock performance of IPOs is measured by the equal-weighted reference portfolio-adjusted three-year BHARs. Each IPO firm in the sample is matched to a reference portfolio based on the existing listed firms classified with similar size and B/M as well as within the same industry category, according to the two-digit ICB codes. The whole sample consists of 786 IPOs issued during the pre-reform period and 963 IPOs issued during the post-reform period. The median value of IBR_{MAIN} (in Figure 1a) or IBR_{ALT} (in Figure 1b) is used to segment all IPOs into two groups: Low and High reputation groups. IBR_{MAIN} and IBR_{ALT} represent the three-year moving average ($t-3$, $t-2$, $t-1$) of the aggregate gross proceeds raised and the total number of IPOs managed, respectively, by each IB in each calendar year t , over the sample period. 1994-95 refers to the results of IPOs issued in both 1994 and 1995 together, while 2004-05 refers to the results of IPOs issued in both 2004 and 2005 together, due to the limited number of 14 IPOs in 1995 and 15 IPOs in 2005.

Appendix I: Two Time-Varying Proxies for IB Reputation

This appendix presents a complete list of 165 Chinese IBs that managed or co-managed at least one IPO on the SHSE or SZSE over period 1993 to 2010, according to the main proxy for IB reputation (IBR_{MAIN} ; in Panel A) and the alternative proxy for IB reputation (IBR_{ALT} ; in Panel B). Specifically, for a set of IBs I in each calendar year t , we first define reputation ranking of IB i , IBR_{MAIN} , as a continuous variable on $[0, 10]$: $10 \times \left[\ln x_{i,t} / \max_{i \in I} (\ln x_{i,t}) \right]$, where $x_{i,t}$ represents the raised aggregate gross proceeds by IB i in year t . The three-year moving average ($t-3, t-2, t-1$) reputation ranking of IB i in year t is computed as: $IBR_{MAINi,t} = (IBR_{MAINi,t-1} + IBR_{MAINi,t-2} + IBR_{MAINi,t-3})/3$. The alternative proxy for IB reputation, IBR_{ALT} , is calculated based on the three-year moving average ($t-3, t-2, t-1$) of the total number of IPOs managed by each IB in each calendar year t : $IBR_{ALTi,t} = (N_{i,t-1} + N_{i,t-2} + N_{i,t-3})/3$. If an IPO is co-managed by two or more IBs, we split the raised aggregate gross proceeds and the total number of IPOs equally among them.

IB	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Panel A: Main proxy for IB reputation (IBR_{MAIN})																		
AJ	--	--	--	--	--	--	--	--	--	--	--	--	--	1.71	1.71	1.71	--	--
Anhui	--	--	--	2.22	4.75	7.01	4.79	4.77	2.51	2.51	--	--	--	--	--	--	--	--
Anhui Intl. Trust & Investment Corp.	7.71	3.85	2.57	2.34	4.48	7.02	4.68	2.54	--	--	--	--	--	--	--	--	--	--
Anhui Trust & Investment Corp.	--	--	--	1.86	1.86	4.09	2.23	4.42	2.19	2.19	--	--	--	--	--	--	--	--
Beijing	--	4.22	2.82	4.64	4.40	6.98	8.15	5.56	2.99	1.87	1.87	4.32	2.45	4.32	1.87	1.87	--	--
Beijing Intl. Trust & Investment Corp.	--	--	--	--	--	2.31	2.31	2.31	--	--	--	--	--	--	--	--	--	--
BOCI	--	--	--	--	--	--	--	--	--	--	2.85	5.42	5.42	5.09	5.41	8.16	5.64	5.86
Bohai	--	--	--	--	--	--	--	--	--	--	--	2.93	2.93	4.77	3.64	3.64	3.85	4.59
Capital	--	--	--	--	--	--	--	--	--	--	--	--	--	2.34	3.77	3.77	1.43	--
CCAMC	--	--	--	--	--	--	--	--	--	--	1.93	1.93	1.93	--	1.97	1.97	1.97	--
CEDTIC	--	--	--	2.67	5.33	7.74	7.19	4.52	2.11	--	--	--	--	--	--	--	--	--
Central China	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.27
CGWAMC	--	--	--	--	--	--	--	--	--	--	--	2.48	2.48	2.48	--	--	--	--
CHAMC	--	--	--	--	--	--	--	--	--	1.89	3.94	6.42	4.54	2.48	--	--	--	--
Changjiang	--	--	--	--	--	--	--	2.75	5.08	6.99	6.09	6.91	4.99	3.14	--	--	--	2.18
Changjiang BNP Paribas Peregrine	--	--	--	--	--	--	--	--	--	--	--	2.56	2.56	4.24	1.68	1.68	--	--
Chengdu	5.62	2.81	1.87	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
China	--	--	--	--	--	--	--	--	--	--	--	--	--	1.80	4.35	4.35	5.31	5.61
China Cinda Trust & Investment Corp.	--	--	--	--	2.13	4.28	7.12	4.99	2.84	--	--	--	--	--	--	--	--	--
China Communication	--	--	--	--	--	--	2.14	4.94	7.53	7.46	4.66	2.07	--	--	--	--	--	--
China Dragon	--	--	--	--	--	--	--	--	--	--	2.35	2.35	2.35	1.46	1.46	3.32	3.48	5.68
China Education Sci.-Tech. Trust & Investment Corp.	--	--	--	--	2.23	2.23	4.36	2.13	2.13	--	--	--	--	--	--	--	--	--
China Euro	--	--	--	--	--	--	--	--	--	--	--	3.14	3.14	3.14	--	--	1.94	1.94
China Galaxy	--	--	--	--	--	--	--	2.24	2.24	4.25	4.86	7.84	8.51	8.77	8.88	9.33	8.42	8.46
China Huarong Trust & Investment Corp.	--	--	--	--	--	--	2.08	2.08	2.08	--	--	--	--	--	--	--	--	--
China Merchants	--	--	2.34	4.70	7.29	7.10	4.75	2.15	--	2.27	4.68	7.38	7.65	7.56	6.82	6.58	6.87	7.95
China Minzu	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.48	3.20	3.20	3.96
China Minzu Intl. & Investment Corp.	--	--	--	--	1.75	1.75	4.26	2.52	2.52	--	--	--	--	--	--	--	--	--
China Orient Trust & Investment Corp.	--	--	--	--	2.34	2.34	5.24	4.99	4.99	2.09	--	--	--	--	--	--	--	--
China People's Insurance Trust & Investment Corp.	--	3.55	2.37	4.43	2.06	2.06	--	--	--	--	--	--	--	--	--	--	--	--
China Sci.-Tech. Intl. Trust & Investment Corp.	--	--	--	--	2.02	2.02	4.21	4.44	4.44	2.26	--	--	--	--	--	--	--	--
Chung Mei Trust & Investment Corp.	--	--	--	--	2.27	2.27	4.82	2.55	2.55	--	--	--	--	--	--	--	--	--
CICC	--	--	--	--	--	--	2.36	5.62	8.95	9.92	9.46	6.13	6.13	6.67	10.00	9.93	9.93	9.93
Cinda	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.79	2.79	4.87	4.40
CITIC	--	--	--	2.65	5.98	9.13	9.56	9.41	9.19	8.65	8.80	8.77	9.04	8.84	9.13	9.66	9.49	9.62
CITIC Wantong	--	--	--	--	--	--	--	--	--	--	--	2.39	2.39	4.44	2.05	2.05	--	--

Continued

Appendix I (Continued)

IB	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Panel A: Main proxy for IB reputation (IBR_{MAIN})																		
CJIS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.60	3.93	6.02	7.33
Credit Suisse Founder	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.29
Dalian	--	--	--	--	--	--	--	2.06	2.06	2.06	--	--	--	--	--	--	--	--
Dapeng	--	--	--	2.21	4.86	7.10	7.49	7.40	7.93	7.40	7.16	4.40	2.33	--	--	--	--	--
Daton	--	--	--	--	--	--	--	--	--	--	--	2.31	2.31	2.31	--	--	--	--
Dongguan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.43
Donghai	--	--	--	--	--	--	--	--	--	--	--	--	--	1.72	3.28	4.85	4.79	5.55
Dongxing	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.70	--
DSSC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.70
Essence	--	--	--	--	--	--	--	--	--	--	--	--	--	1.64	1.64	4.67	4.89	7.83
Everbright	5.47	2.73	1.82	2.38	5.14	8.00	8.56	8.56	8.10	7.23	6.93	7.62	5.56	4.80	3.82	5.90	6.54	7.18
First Capital	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.79	4.45
Fortune	--	--	--	--	--	--	--	--	--	--	--	--	--	1.54	3.18	3.18	1.64	--
Fortune CLSA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.56
Foshan	--	--	--	--	--	--	--	--	--	--	--	2.87	2.87	4.91	4.11	4.11	2.08	--
Foshan Intl. Trust & Investment Corp.	6.51	3.26	2.17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Founder	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.64	1.64	1.64	--
Fujian Huaxing Trust & Investment Corp.	--	--	--	2.11	4.52	4.52	2.41	--	--	--	--	--	--	--	--	--	--	--
Ganshu Trust & Investment Corp.	--	--	--	1.87	3.93	6.27	4.40	4.56	2.21	2.21	--	--	--	--	--	--	--	--
Gansu	--	--	--	--	2.25	2.25	2.25	--	--	--	--	--	--	--	--	--	--	--
Golden Sun	--	--	--	--	--	--	--	--	--	--	--	2.73	2.73	2.73	--	--	--	1.87
Goldman Sachs	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.75	2.75	5.50	2.75
Goldstate	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.77	3.66	5.61
Great Wall	--	--	--	--	2.22	4.91	4.91	4.93	4.62	6.56	6.31	7.27	5.33	3.33	--	--	--	--
Guangdong	--	3.43	2.29	4.60	5.18	7.57	5.26	5.08	5.12	7.06	6.37	6.92	4.98	2.98	--	--	--	--
GF	--	4.20	5.52	8.61	8.79	8.92	8.82	9.03	9.02	8.70	7.72	8.05	8.07	8.35	7.45	7.46	7.41	8.16
Guangxi Trust & Investment Corp.	--	--	--	--	--	--	2.05	2.05	2.05	--	--	--	--	--	--	--	--	--
Guangzhou	7.38	3.69	2.46	--	2.48	4.61	4.61	2.13	--	--	2.15	5.07	5.07	2.92	1.73	1.73	1.73	1.82
Guizhou	--	--	--	--	1.92	1.92	1.92	--	--	--	--	--	--	--	--	--	--	--
Guodu	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.08	4.02
Guolian	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.10	3.87	3.87
Guosen	--	--	--	--	--	2.92	5.92	9.06	8.89	8.06	6.85	7.19	5.02	5.58	4.97	7.66	7.91	8.62
Guotai	9.59	4.80	6.43	6.57	9.88	9.97	9.72	6.41	3.08	--	--	--	--	--	--	--	--	--
Guotai Junan	--	--	--	--	--	--	2.85	6.13	9.36	9.03	8.65	8.55	6.03	6.35	5.37	7.87	4.65	5.57
Guoyuan	--	--	--	--	--	--	--	--	--	--	2.05	5.10	7.33	6.82	5.50	5.30	5.89	6.72
Hainan	--	4.61	5.62	7.47	4.39	1.85	--	--	--	--	--	--	--	--	--	--	--	--
Hainan HK Macau Intl. Trust & Investment Corp.	--	--	--	1.45	4.00	6.24	7.10	4.55	2.31	--	--	--	--	--	--	--	--	--
Hainan Intl. Trust & Investment Corp.	--	--	--	--	2.11	2.11	4.55	2.44	2.44	--	--	--	--	--	--	--	--	--
Haitong	8.45	8.44	8.44	8.43	8.63	8.36	8.88	9.11	9.13	8.17	7.00	7.43	5.06	5.18	4.84	7.19	7.38	7.84
Hantang	--	--	--	--	--	--	--	--	--	--	--	2.81	2.81	2.81	--	--	--	--
Hebei	--	--	--	1.73	3.50	3.50	3.90	2.13	2.13	1.72	3.99	3.99	2.26	--	--	--	--	--
Heilongjiang	--	--	--	2.03	2.03	2.03	--	--	--	--	--	--	--	--	--	--	--	--
Henan	--	--	--	--	1.95	1.95	1.95	--	--	--	--	--	--	--	--	--	--	--

Continued

Appendix I (Continued)

IB	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Panel A: Main proxy for IB reputation (IBR_{MAIN})																		
Hengtai	--	--	--	--	--	--	--	--	--	--	--	--	--	1.96	1.96	1.96	--	--
Hongta	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.75	3.63
Hongyuan	--	--	--	--	--	--	--	2.28	2.28	4.38	2.09	5.38	3.28	5.36	3.65	5.68	5.36	6.62
HuaAn	--	--	--	--	--	--	--	--	--	1.94	4.19	6.87	4.93	2.67	--	--	--	--
Huafu	5.03	2.51	1.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hualin	--	--	--	--	--	--	--	--	--	--	--	2.43	2.43	2.43	--	--	--	2.38
Huarong	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.18
Huatai	--	--	--	--	--	--	--	2.85	4.74	7.15	6.76	7.51	7.31	6.86	6.45	6.66	6.97	7.38
Huatai United	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.96	4.99
Huaxia	8.25	9.12	8.47	8.77	8.35	8.69	8.70	8.71	8.99	8.39	8.15	8.21	5.75	3.07	--	--	--	--
Hubei	6.46	3.23	2.15	2.31	5.22	7.90	7.60	4.69	2.01	--	--	--	--	--	--	--	--	--
Huizhou	5.91	2.96	1.97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hunan	6.85	3.43	2.28	1.93	1.93	4.27	2.34	2.34	--	--	--	--	--	--	--	--	--	--
Hunan Intl. Trust & Investment Corp.	--	--	--	--	1.77	1.77	1.77	--	--	--	--	--	--	--	--	--	--	--
Industrial	--	--	--	2.06	4.67	4.67	4.72	4.34	6.85	6.80	7.11	7.83	5.78	5.16	3.94	6.62	6.77	7.24
Jiangmen Intl. Trust & Investment Corp.	6.43	6.83	4.55	2.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Jiangsu	7.83	7.68	5.12	5.28	5.05	7.27	6.92	4.64	2.42	--	--	--	--	--	--	--	--	--
Jilin	5.84	2.92	1.95	--	--	2.42	2.42	2.42	--	--	--	--	--	--	--	--	--	--
Junan	7.80	3.90	4.62	5.00	8.12	9.18	9.31	6.19	3.11	--	--	--	--	--	--	--	--	--
Jutian	--	--	--	--	--	--	--	--	--	--	--	2.73	2.73	2.73	--	--	--	--
Lanzhou Trust & Investment Corp.	6.11	3.06	2.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Liaoning	--	--	--	2.08	2.08	2.08	--	--	--	--	--	--	--	--	--	--	--	--
Minfa	--	--	--	--	--	--	--	--	--	2.08	2.08	4.49	2.41	2.41	--	--	--	--
Minsheng	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.43	3.16	5.13	6.28
Nanfang	7.54	7.64	8.41	8.93	9.44	8.99	8.91	9.15	9.35	9.02	8.58	8.81	8.92	6.04	2.73	--	--	--
Nanjing	--	--	--	--	--	--	--	--	--	--	--	--	2.24	2.24	2.24	2.26	3.90	5.69
New Times	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.39	1.39	1.39	2.23
Ningbo	--	--	--	2.02	2.02	4.05	2.03	2.03	--	--	--	--	--	--	--	--	--	--
Ningxia	--	--	--	--	--	--	2.46	2.46	2.46	--	--	--	--	--	--	--	--	--
Northeast	--	--	--	--	--	--	--	1.87	1.87	4.17	4.52	7.36	7.74	7.41	6.19	5.56	3.66	4.48
Northwest	--	--	--	--	--	--	--	--	--	1.84	1.84	4.18	2.34	2.34	--	--	--	--
Orient	--	--	--	--	--	2.25	2.25	4.64	5.18	7.56	5.16	5.05	5.28	5.28	4.49	1.89	4.66	4.92
Pacific	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.44
PingAn	--	--	--	2.35	4.47	4.47	2.12	2.39	4.48	6.83	6.83	7.89	5.54	5.53	4.72	7.29	7.56	8.43
Qilu	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.23	4.27
Qingdao	--	--	--	1.85	1.85	1.85	--	--	--	--	--	--	--	--	--	--	--	--
Rising	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.91	3.69
Sealand	--	--	--	--	--	--	--	--	--	--	--	2.66	2.66	2.66	1.55	1.55	3.36	3.92
Shaanxi	--	--	--	--	1.81	1.81	1.81	--	--	--	--	--	--	--	--	--	--	--
Shandong	3.62	1.81	1.21	--	--	2.35	5.06	7.60	5.25	2.54	--	--	--	--	--	--	--	--
Shandong Intl. Trust & Investment Corp.	--	--	--	--	--	--	2.51	2.51	2.51	--	--	--	--	--	--	--	--	--
Shanghai Finance	5.72	2.86	1.91	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Shanghai Intl.	10.00	9.42	6.28	2.95	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Continued

Appendix I (Continued)

IB	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Panel A: Main proxy for IB reputation (IBR_{MAIN})																		
Shanghai Shenyin	9.57	9.37	9.58	9.44	6.38	3.04	--	--	--	--	--	--	--	--	--	--	--	--
Shantou	6.32	3.16	2.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Shanxi	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Shenyin & Wanguo	--	--	--	2.94	6.24	9.33	9.26	5.96	2.87	--	2.18	5.05	5.05	5.74	1.97	1.97	1.97	--
Shenzhen Intl.	5.76	2.88	1.92	2.03	5.01	5.01	2.98	--	--	--	--	--	--	--	--	--	--	--
Shenzhen Intl. Trust & Investment Corp.	7.91	3.96	2.64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Shenzhen SEZ	9.12	8.74	5.83	5.04	2.26	2.26	--	--	--	--	--	--	--	--	--	--	--	--
Sichuan	3.62	5.14	3.42	2.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sinolink	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.73	3.51	5.57	6.71
Soochow	--	--	--	--	--	--	--	--	--	--	--	2.54	2.54	4.43	3.73	3.73	4.06	4.70
South China	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.98
Southwest	--	--	--	--	2.71	2.71	2.71	2.68	4.93	7.21	6.69	7.03	4.75	2.59	1.69	1.69	1.69	2.68
Sun	--	--	--	--	--	--	--	--	--	1.92	4.29	6.68	4.77	2.39	--	--	--	--
Tebon	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.62	3.60	5.64
Three Gorges	--	--	--	--	--	--	--	2.23	2.23	2.23	--	--	--	--	--	--	--	--
Tianjin	5.98	2.99	3.86	1.86	1.86	--	--	--	--	--	--	--	--	--	--	--	--	--
Tianjin Intl. Trust & Investment Corp.	5.99	2.99	2.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tianjin Northern Intl. Trust & Investment Corp.	--	--	--	--	--	--	--	2.11	2.11	2.11	--	--	--	--	--	--	--	--
Tianjin Trust & Investment Corp.	--	--	--	--	--	--	--	2.03	2.03	2.03	--	--	--	--	--	--	--	--
Tiantong	--	--	--	--	--	--	--	--	1.98	4.23	6.24	7.44	5.20	3.18	--	--	--	--
Tianyi	--	--	--	--	--	--	--	--	--	2.06	4.01	6.33	6.54	4.60	2.27	--	--	--
UBS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.12	5.49	7.16	6.74
United	--	--	--	--	--	2.48	5.15	7.92	8.26	5.59	4.84	4.89	6.99	6.69	5.47	5.61	6.02	4.37
V-Sun	--	--	--	--	1.80	3.86	3.86	2.06	--	--	--	--	--	--	--	--	--	--
Wanlian	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.82
West China	--	--	--	--	--	--	--	--	--	--	--	2.68	2.68	4.31	1.63	1.63	--	--
Western	--	--	--	--	--	--	--	--	--	--	1.86	4.59	4.59	2.73	--	--	1.66	4.02
Wuhan	7.00	3.50	2.33	2.18	2.18	2.18	--	--	--	--	--	--	--	--	--	--	--	--
Wuxi	--	--	--	--	--	--	--	--	--	--	--	2.85	2.85	2.85	--	--	--	--
Xiamen	4.11	2.06	1.37	1.76	3.69	5.87	6.03	4.10	1.92	--	--	--	--	--	--	--	--	--
Xiamen Intl. Trust & Investment Corp.	--	--	--	--	--	--	2.40	2.40	2.40	--	--	--	--	--	--	--	--	--
Xiamen Jianfa Trust & Investment Corp.	--	--	--	--	--	--	1.95	1.95	1.95	--	--	--	--	--	--	--	--	--
Xiangcai	--	--	--	1.83	4.19	6.82	7.44	7.87	5.24	5.09	4.79	7.60	5.31	2.81	--	--	--	--
Xinjiang	--	--	--	--	--	--	--	--	--	--	2.33	2.33	2.33	--	--	--	--	--
Xinjiang Hong Yuan Trust & Investment Corp.	--	--	--	1.75	1.75	3.88	2.14	2.14	--	--	--	--	--	--	--	--	--	--
Yellow River	--	--	--	--	2.17	2.17	2.17	--	--	--	--	--	--	--	--	--	--	--
Yunnan	6.45	3.22	2.15	--	1.53	1.53	1.53	--	--	--	--	--	--	--	--	--	--	--
Zhejiang	6.73	7.08	4.72	4.39	1.91	4.33	2.41	4.56	2.15	2.15	--	--	--	--	--	--	--	--
Zhejiang Intl. Trust & Investment Corp.	--	--	--	--	--	2.35	4.59	6.71	4.37	2.12	--	--	--	--	--	--	--	--
Zheshang	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.87
Zhongde	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.02	4.58
Zhongxing Trust & Investment Corp.	--	--	--	--	2.25	2.25	2.25	--	--	--	--	--	--	--	--	--	--	--
Zhuhai	6.89	3.44	2.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Continued

Appendix I (Continued)

IB	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Panel B: Alternative proxy for IB reputation (IBR_{ALT})																		
AJ	--	--	--	--	--	--	--	--	--	--	--	--	--	0.33	0.33	0.33	--	--
Anhui	--	--	--	0.67	1.67	2.00	1.33	1.33	1.00	1.00	--	--	--	--	--	--	--	--
Anhui Intl. Trust & Investment Corp.	1.00	0.50	0.33	0.67	1.00	2.00	1.33	1.00	--	--	--	--	--	--	--	--	--	--
Anhui Trust & Investment Corp.	--	--	--	0.33	0.33	0.67	0.33	0.67	0.33	0.33	--	--	--	--	--	--	--	--
Beijing	--	0.50	0.33	0.67	1.33	1.67	2.33	1.33	1.00	0.33	0.33	0.67	0.33	0.67	0.33	0.33	--	--
Beijing Intl. Trust & Investment Corp.	--	--	--	--	--	0.33	0.33	0.33	--	--	--	--	--	--	--	--	--	--
BOCI	--	--	--	--	--	--	--	--	--	--	0.50	0.83	0.83	0.67	1.17	1.33	1.00	1.83
Bohai	--	--	--	--	--	--	--	--	--	--	--	0.67	0.67	1.00	0.67	0.67	0.67	1.33
Capital	--	--	--	--	--	--	--	--	--	--	--	--	--	0.33	0.67	0.67	0.33	--
CCAMC	--	--	--	--	--	--	--	--	--	--	0.33	0.33	0.33	--	0.67	0.67	0.67	--
CEDTIC	--	--	--	2.67	4.00	4.67	2.33	1.00	0.33	--	--	--	--	--	--	--	--	--
Central China	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.67
CGWAMC	--	--	--	--	--	--	--	--	--	--	--	0.33	0.33	0.33	--	--	--	--
CHAMC	--	--	--	--	--	--	--	--	--	0.33	0.67	1.00	0.67	0.33	--	--	--	--
Changjiang	--	--	--	--	--	--	--	1.67	2.33	2.67	1.33	1.33	1.00	0.67	--	--	--	0.67
Changjiang BNP Paribas Peregrine	--	--	--	--	--	--	--	--	--	--	--	0.67	0.67	1.33	0.67	0.67	--	--
Chengdu	2.00	1.00	0.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
China	--	--	--	--	--	--	--	--	--	--	--	--	--	0.33	1.50	1.50	2.83	4.67
China Cinda Trust & Investment Corp.	--	--	--	--	0.67	1.00	1.33	0.67	0.33	--	--	--	--	--	--	--	--	--
China Communication	--	--	--	--	--	--	0.33	1.67	2.33	2.33	1.00	0.33	--	--	--	--	--	--
China Dragon	--	--	--	--	--	--	--	--	--	--	0.67	0.67	0.67	0.33	0.33	0.67	0.67	1.33
China Education Sci.-Tech. Trust & Investment Corp.	--	--	--	--	0.33	0.33	0.67	0.33	0.33	--	--	--	--	--	--	--	--	--
China Euro	--	--	--	--	--	--	--	--	--	--	--	1.33	1.33	1.33	--	--	0.33	0.33
China Galaxy	--	--	--	--	--	--	--	0.33	0.33	0.67	1.00	1.67	1.67	2.28	2.00	2.17	1.22	1.92
China Huarong Trust & Investment Corp.	--	--	--	--	--	--	0.33	0.33	0.33	--	--	--	--	--	--	--	--	--
China Merchants	--	--	0.33	1.33	2.67	3.00	2.00	0.67	--	0.67	1.33	1.67	1.33	1.67	2.33	3.33	5.00	10.67
China Minzu	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.33	0.67	0.67	1.33
China Minzu Intl. & Investment Corp.	--	--	--	--	0.33	0.33	0.67	0.33	0.33	--	--	--	--	--	--	--	--	--
China Orient Trust & Investment Corp.	--	--	--	--	0.67	0.67	1.33	1.00	1.00	0.33	--	--	--	--	--	--	--	--
China People's Insurance Trust & Investment Corp.	--	1.00	0.67	1.33	0.67	0.67	--	--	--	--	--	--	--	--	--	--	--	--
China Sci.-Tech. Intl. Trust & Investment Corp.	--	--	--	--	0.33	0.33	0.67	1.00	1.00	0.67	--	--	--	--	--	--	--	--
Chung Mei Trust & Investment Corp.	--	--	--	--	0.33	0.33	0.67	0.33	0.33	--	--	--	--	--	--	--	--	--
CICC	--	--	--	--	--	--	0.33	0.67	1.00	1.67	2.00	1.67	1.00	1.36	3.08	3.25	3.22	2.92
Cinda	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.11	0.11	0.44	1.33
CITIC	--	--	--	1.33	6.00	7.33	8.33	8.00	9.33	8.00	4.67	2.67	2.33	2.53	4.14	4.81	5.28	7.75
CITIC Wantong	--	--	--	--	--	--	--	--	--	--	--	0.33	0.33	1.00	0.67	0.67	--	--
CJIS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.33	0.67	1.00	3.67
Credit Suisse Founder	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.67
Dalian	--	--	--	--	--	--	--	0.33	0.33	0.33	--	--	--	--	--	--	--	--
Dapeng	--	--	--	1.00	2.67	3.00	3.00	2.00	3.00	2.33	2.33	1.00	0.67	--	--	--	--	--
Daton	--	--	--	--	--	--	--	--	--	--	--	0.33	0.33	0.33	--	--	--	--
Dongguan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.00
Donghai	--	--	--	--	--	--	--	--	--	--	--	--	--	0.33	0.67	1.00	1.00	2.00

Continued

Appendix I (Continued)

IB	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Panel B: Alternative proxy for IB reputation (IBR_{ALT})																		
Dongxing	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.33	0.33
DSSC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.33
Essence	--	--	--	--	--	--	--	--	--	--	--	--	--	0.33	0.33	1.00	1.00	4.33
Everbright	2.00	1.00	0.67	1.00	2.67	3.33	3.33	3.33	3.33	3.00	2.33	2.67	2.00	1.33	2.67	3.00	4.33	4.67
First Capital	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.33	1.67
Fortune	--	--	--	--	--	--	--	--	--	--	--	--	--	0.33	0.67	0.67	0.33	--
Fortune CLSA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.00
Foshan	--	--	--	--	--	--	--	--	--	--	--	0.33	0.33	1.00	1.67	1.67	1.00	--
Foshan Intl. Trust & Investment Corp.	1.00	0.50	0.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Founder	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.67	0.67	0.67	--
Fujian Huaxing Trust & Investment Corp.	--	--	--	0.67	1.33	1.33	0.67	--	--	--	--	--	--	--	--	--	--	--
Ganshu Trust & Investment Corp.	--	--	--	0.33	0.67	1.00	0.67	0.67	0.33	0.33	--	--	--	--	--	--	--	--
Gansu	--	--	--	--	0.33	0.33	0.33	--	--	--	--	--	--	--	--	--	--	--
Golden Sun	--	--	--	--	--	--	--	--	--	--	--	0.67	0.67	0.67	--	--	--	0.33
Goldman Sachs	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.44	0.44	0.78	0.33
Goldstate	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.33	0.67	1.00
Great Wall	--	--	--	--	0.33	1.33	1.33	1.33	1.00	1.67	1.67	2.00	1.33	1.00	--	--	--	--
Guangdong	--	0.50	0.33	1.33	3.00	3.67	2.67	2.00	2.33	3.00	2.00	2.00	1.33	1.00	--	--	--	--
GF	--	1.00	1.00	5.00	8.33	10.33	8.67	7.67	6.67	6.33	4.00	3.67	2.00	3.00	4.67	7.67	7.33	11.67
Guangxi Trust & Investment Corp.	--	--	--	--	--	--	0.33	0.33	0.33	--	--	--	--	--	--	--	--	--
Guangzhou	3.00	1.50	1.00	--	0.33	0.67	0.67	0.33	--	--	0.33	0.67	0.67	0.33	0.33	0.33	0.33	0.33
Guizhou	--	--	--	--	0.33	0.33	0.33	--	--	--	--	--	--	--	--	--	--	--
Guodu	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.67	1.00
Guolian	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.33	0.67	0.67
Guosen	--	--	--	--	--	2.67	4.00	8.00	6.00	5.33	1.67	2.33	1.67	3.33	7.33	10.33	12.67	18.00
Guotai	3.00	1.50	2.00	8.67	14.67	18.00	12.33	6.33	2.00	--	--	--	--	--	--	--	--	--
Guotai Junan	--	--	--	--	--	--	0.67	4.67	8.00	8.33	5.67	2.67	1.67	1.08	1.08	1.75	1.00	1.75
Guoyuan	--	--	--	--	--	--	--	--	--	--	0.33	1.33	1.67	1.67	1.33	1.67	2.67	4.00
Hainan	--	2.00	1.67	2.00	0.67	0.33	--	--	--	--	--	--	--	--	--	--	--	--
Hainan HK Macau Intl. Trust & Investment Corp.	--	--	--	0.33	1.67	2.33	2.33	1.00	0.33	--	--	--	--	--	--	--	--	--
Hainan Intl. Trust & Investment Corp.	--	--	--	--	0.33	0.33	1.00	0.67	0.67	--	--	--	--	--	--	--	--	--
Haitong	9.00	5.00	3.67	3.67	4.67	4.67	4.33	5.33	5.67	4.00	2.00	2.00	1.00	1.67	3.11	4.78	5.44	7.33
Hantang	--	--	--	--	--	--	--	--	--	--	--	0.67	0.67	0.67	--	--	--	--
Hebei	--	--	--	0.33	0.67	0.67	0.67	0.33	0.33	0.33	1.00	1.00	0.67	--	--	--	--	--
Heilongjiang	--	--	--	0.33	0.33	0.33	--	--	--	--	--	--	--	--	--	--	--	--
Henan	--	--	--	--	0.33	0.33	0.33	--	--	--	--	--	--	--	--	--	--	--
Hengtai	--	--	--	--	--	--	--	--	--	--	--	--	--	0.67	0.67	0.67	--	--
Hongta	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.33	0.67
Hongyuan	--	--	--	--	--	--	--	0.33	0.33	0.67	0.33	1.67	1.33	2.33	1.33	2.00	1.33	4.00
HuaAn	--	--	--	--	--	--	--	--	--	0.67	1.33	2.00	1.33	0.67	--	--	--	--
Huafu	1.00	0.50	0.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hualin	--	--	--	--	--	--	--	--	--	--	--	0.33	0.33	0.33	--	--	--	1.00
Huarong	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.33

Continued

Appendix I (Continued)

IB	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Panel B: Alternative proxy for IB reputation (IBR_{ALT})																		
Huatai	--	--	--	--	--	--	--	1.67	2.00	3.33	3.00	3.00	2.00	1.33	2.67	3.67	3.33	4.00
Huatai United	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.33	8.00
Huaxia	6.00	4.50	3.33	6.67	8.00	8.67	5.00	4.67	5.33	4.33	3.00	2.33	1.67	1.00	--	--	--	--
Hubei	2.00	1.00	0.67	1.00	3.00	4.33	3.67	1.67	0.33	--	--	--	--	--	--	--	--	--
Huizhou	1.00	0.50	0.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hunan	2.00	1.00	0.67	0.33	0.33	0.67	0.33	0.33	--	--	--	--	--	--	--	--	--	--
Hunan Intl. Trust & Investment Corp.	--	--	--	--	0.33	0.33	0.33	--	--	--	--	--	--	--	--	--	--	--
Industrial	--	--	--	0.33	1.67	1.67	1.67	0.67	1.33	1.33	2.00	2.67	2.33	2.00	1.33	1.83	1.83	2.83
Jiangmen Intl. Trust & Investment Corp.	1.00	1.00	0.67	0.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Jiangsu	4.00	2.50	1.67	1.67	2.00	2.33	1.67	1.00	0.67	--	--	--	--	--	--	--	--	--
Jilin	1.00	0.50	0.33	--	--	0.33	0.33	0.33	--	--	--	--	--	--	--	--	--	--
Junan	4.00	2.00	1.67	4.33	9.67	12.67	10.00	4.67	1.33	--	--	--	--	--	--	--	--	--
Jutian	--	--	--	--	--	--	--	--	--	--	--	0.67	0.67	0.67	--	--	--	--
Lanzhou Trust & Investment Corp.	1.00	0.50	0.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Liaoning	--	--	--	0.67	0.67	0.67	--	--	--	--	--	--	--	--	--	--	--	--
Minfa	--	--	--	--	--	--	--	--	--	0.67	0.67	1.00	0.33	0.33	--	--	--	--
Minsheng	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.33	0.67	1.00	3.00
Nanfang	4.00	3.00	2.67	5.67	9.00	9.33	6.33	7.33	8.33	8.00	3.83	2.50	1.83	1.00	0.33	--	--	--
Nanjing	--	--	--	--	--	--	--	--	--	--	--	--	0.33	0.33	0.33	0.33	0.67	1.00
New Times	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.33	0.33	0.33	1.00
Ningbo	--	--	--	0.67	0.67	1.00	0.33	0.33	--	--	--	--	--	--	--	--	--	--
Ningxia	--	--	--	--	--	--	0.33	0.33	0.33	--	--	--	--	--	--	--	--	--
Northeast	--	--	--	--	--	--	--	0.33	0.33	1.33	1.67	2.33	2.00	1.67	1.67	1.67	1.33	2.33
Northwest	--	--	--	--	--	--	--	--	--	0.33	0.33	0.67	0.33	0.33	--	--	--	--
Orient	--	--	--	--	--	0.33	0.33	1.00	1.33	2.00	1.33	1.33	1.00	1.00	1.00	0.67	1.67	1.67
Pacific	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.33
PingAn	--	--	--	0.33	0.67	0.67	0.33	0.67	1.33	2.67	2.67	3.33	2.00	3.67	6.00	8.67	10.67	19.67
Qilu	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.67	1.00
Qingdao	--	--	--	0.33	0.33	0.33	--	--	--	--	--	--	--	--	--	--	--	--
Rising	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.33	0.67
Sealand	--	--	--	--	--	--	--	--	--	--	--	0.33	0.33	0.33	0.33	0.33	0.67	1.00
Shandong	1.00	0.50	0.33	--	--	0.67	1.33	1.67	1.00	0.33	--	--	--	--	--	--	--	--
Shandong Intl. Trust & Investment Corp.	--	--	--	--	--	--	0.33	0.33	0.33	--	--	--	--	--	--	--	--	--
Shanghai Finance	1.00	0.50	0.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Shanghai Intl.	18.00	10.50	7.00	1.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Shanghai Shenyin	18.00	11.50	8.33	6.33	4.67	4.00	--	--	--	--	--	--	--	--	--	--	--	--
Shannxi	--	--	--	--	0.33	0.33	0.33	--	--	--	--	--	--	--	--	--	--	--
Shantou	1.00	0.50	0.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Shanxi	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.00	1.00	1.00	--
Shenyin & Wanguo	--	--	--	3.67	10.33	12.33	10.00	3.33	1.33	--	0.67	1.67	1.67	1.42	0.42	1.08	1.67	3.00
Shenzhen Intl.	1.00	0.50	0.33	0.33	2.67	2.67	2.33	--	--	--	--	--	--	--	--	--	--	--
Shenzhen Intl. Trust & Investment Corp.	4.00	2.00	1.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Shenzhen SEZ	12.00	7.00	4.67	1.33	0.67	0.67	--	--	--	--	--	--	--	--	--	--	--	--

Continued

Appendix I (Continued)

IB	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Panel B: Alternative proxy for IB reputation (IBR_{ALT})																		
Sichuan	1.00	1.00	0.67	0.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sinolink	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.67	1.00	2.00	4.33
Soochow	--	--	--	--	--	--	--	--	--	--	--	0.33	0.33	1.00	1.67	1.67	2.00	2.33
South China	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.33
Southwest	--	--	--	--	0.33	0.33	0.33	0.67	1.00	1.33	1.00	1.00	0.67	0.33	0.67	0.67	0.67	2.33
Sun	--	--	--	--	--	--	--	--	--	0.33	1.33	1.67	1.33	0.33	--	--	--	--
Tebon	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.33	0.67	1.00
Three Gorges	--	--	--	--	--	--	--	0.33	0.33	0.33	--	--	--	--	--	--	--	--
Tianjin	1.00	0.50	0.67	0.33	0.33	--	--	--	--	--	--	--	--	--	--	--	--	--
Tianjin Intl. Trust & Investment Corp.	1.00	0.50	0.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tianjin Northern Intl. Trust & Investment Corp.	--	--	--	--	--	--	--	0.33	0.33	0.33	--	--	--	--	--	--	--	--
Tianjin Trust & Investment Corp.	--	--	--	--	--	--	--	0.33	0.33	0.33	--	--	--	--	--	--	--	--
Tiantong	--	--	--	--	--	--	--	--	0.33	1.33	1.67	2.67	1.67	1.33	--	--	--	--
Tianyi	--	--	--	--	--	--	--	--	--	0.33	0.67	1.00	1.00	0.67	0.33	--	--	--
UBS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.94	1.28	1.61	1.33
United	--	--	--	--	--	0.67	1.33	3.00	4.00	3.33	2.00	1.00	1.33	1.33	1.00	1.67	2.00	1.67
V-Sun	--	--	--	--	0.33	0.67	0.67	0.33	--	--	--	--	--	--	--	--	--	--
Wanlian	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.33
West China	--	--	--	--	--	--	--	--	--	--	--	0.33	0.33	0.67	0.33	0.33	--	--
Western	--	--	--	--	--	--	--	--	--	--	0.33	0.67	0.67	0.33	--	--	0.33	1.33
Wuhan	3.00	1.50	1.00	0.67	0.67	0.67	--	--	--	--	--	--	--	--	--	--	--	--
Wuxi	--	--	--	--	--	--	--	--	--	--	--	0.67	0.67	0.67	--	--	--	--
Xiamen	1.00	0.50	0.33	0.33	0.67	1.00	1.00	0.67	0.33	--	--	--	--	--	--	--	--	--
Xiamen Intl. Trust & Investment Corp.	--	--	--	--	--	--	0.33	0.33	0.33	--	--	--	--	--	--	--	--	--
Xiamen Jianfa Trust & Investment Corp.	--	--	--	--	--	--	0.33	0.33	0.33	--	--	--	--	--	--	--	--	--
Xiangcai	--	--	--	0.33	1.00	2.00	2.33	3.33	2.33	2.67	1.67	2.00	1.00	0.33	--	--	--	--
Xinjiang	--	--	--	--	--	--	--	--	--	--	0.67	0.67	0.67	--	--	--	--	--
Xinjiang Hong Yuan Trust & Investment Corp.	--	--	--	0.33	0.33	0.67	0.33	0.33	--	--	--	--	--	--	--	--	--	--
Yellow River	--	--	--	--	0.33	0.33	0.33	--	--	--	--	--	--	--	--	--	--	--
Yunnan	2.00	1.00	0.67	--	0.33	0.33	0.33	--	--	--	--	--	--	--	--	--	--	--
Zhejiang	2.00	1.50	1.00	0.67	0.33	0.67	0.33	0.67	0.33	0.33	--	--	--	--	--	--	--	--
Zhejiang Intl. Trust & Investment Corp.	--	--	--	--	--	0.33	0.67	1.00	0.67	0.33	--	--	--	--	--	--	--	--
Zheshang	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.33
Zhongde	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.67	2.67
Zhongxing Trust & Investment Corp.	--	--	--	--	0.33	0.33	0.33	--	--	--	--	--	--	--	--	--	--	--
Zhuhai	2.00	1.00	0.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

BOCI = Bank of China International; CCAMC = China Cinda Asset Management Corporation; CEDTIC = China Economic Development Trust & Investment Corporation; CGWAMC = China Great Wall Asset Management Corporation; CHAMC = China Huarong Asset Management Corporation; CICC = China International Capital Corporation; CITIC = China International Trust & Investment Corporation; CJIS = China Jianyin Investment Securities; DSSC = Daiwa SSC Securities; Fortune CLSA = Fortune Credit Lyonnais Securities Asia Securities; GF = Guangfa Securities; UBS = Union Bank of Switzerland; Shenzhen SEZ = Shenzhen Special Economic Zone Securities.

Appendix II: Major Takeovers of Chinese IBs

IB	Merged and acquired IBs and the resulting IB
AVIC	Jiangxi South China Trust & Investment Corp. + Bridge Trust & Investment Corp. → South China Securities → Aviation Industry Corporation of China (AVIC) Securities.
BOCI	Hainan HK Macau Intl. Trust & Investment Corp. → HK & Macau Securities; HK & Macau Securities + Bank of China Intl. (BOCI) → BOCI.
Bohai	Tianjin Securities + Tianjin Intl. Trust & Investment Corp. + Tianjin Northern Intl. Trust & Investment Corp. + Tianjin Trust & Investment Corp. → Bohai Securities.
Caida	Heibei Caida Securities + Jiamusi Securities + Heibei Securities → Heibei Caida Securities → Caida Securities.
Central China	Henan Securities → Central China Securities.
Changjiang	China Education Sci.-Tech. Trust & Investment Corp. + Hubei Securities → Hubei Securities → Changjiang Securities; Dapeng Securities + Changjiang Securities → Changjiang Securities; Changjiang Securities + BNP Paribas → Changjiang BNP Paribas Peregrine Securities → Changjiang Securities.
China	Huaxia Securities → China Securities.
China Dragon	Ganshu Trust & Investment Corp. + Lanzhou Trust & Investment Corp. → China Dragon Securities.
China Galaxy	China Huarong Trust & Investment Corp. + China Orient Trust & Investment Corp. + China People's Insurance Trust & Investment Corp. + China Cinda Trust & Investment Corp. + China Great Wall Trust & Investment Corp. → China Galaxy Securities; China Economic Development Trust & Investment Corp. + China Galaxy Securities → China Galaxy Securities.
China Investment	Nanfang Securities → China Jianyin Investment Securities (CJIS) → China Investment Securities.
China Merchants	China Communication Securities → China Merchants Securities; Shenzhen Special Economic Zone (SEZ) Securities → Jutian Securities; Jutian Securities + China Merchants Securities → China Merchants Securities.
China Minzu	China Minzu Intl. Trust & Investment Corp. + Anshan Securities + Leshan Trust & Investment Corp. → China Minzu Securities.
Chinalion	Jiangmen Securities → Hualin Securities → Chinalion Securities.
Cinda	Guizhou Securities + Zhanjiang Securities → Hantang Securities; Hantang Securities + Liaoning Securities + China Cinda Asset Management Corp. (CCAMC) → Cinda Securities.
CITIC Wantong	Qingdao Securities + China Intl. Trust & Investment Corp. (CITIC) → CITIC Wantong Securities.
Daton	Dalian Securities → Daton Securities.
Donghai	Changzhou Securities → Donghai Securities; Zhongxing Trust & Investment Corp. + Donghai Securities → Donghai Securities.
Dongxing	Minfa Securities → Dongxing Securities.
Essence	China Sci.-Tech. Intl. Trust & Investment Corp. → China Sci.-Tech. Securities → Essence Securities; Shantong Securities → Zhongguancun Securities; Zhongguancun Securities + Guangdong Securities + Essence Securities → Essence Securities.
Everbright	Ningbo Securities → Tianyi Securities; Tianyi Securities + Everbright Securities → Everbright Securities.
First Capital	Foshan Securities → First Capital Securities.
Fortune	China Euro Securities → Fortune Credit Lyonnais Securities Asia (CLSA) Securities → Fortune Securities; Hunan Intl. Trust & Investment Corp. + Hunan Trust & Investment Corp. → Fortune Securities.
Founder	Zhejiang Securities → Founder Securities; Hunan Securities → Sun Securities; Sun Securities + Founder Securities → Founder Securities.
GF	Zhuhai Securities → First Securities; First Securities + Wuhan Securities + Guangfa (GF) Securities → GF Securities;
Goldman Sachs	Goldman Sachs + Gao Hua Securities → Goldman Sachs Gao Hua Securities (Goldman Sachs).
Goldstate	Hainan Securities → Goldstate Securities; Hainan Intl. Trust & Investment Corp. + Haikou Trust & Investment Corp. → Goldstate Securities.
Great Wall	China Great Wall Asset Management Corp. (CGWAMC) → Great Wall Securities.
Guodu	Beijing Intl. Trust & Investment Corp. + Chung Mei Trust & Investment Corp. → Guodu Securities.
Guolian	Wuxi Securities → Guolian Securities.
Guotai Junan	Guotai Securities + Junan Securities → Guotai Junan Securities.
Guoyuan	Anhui Intl. Trust & Investment Corp. + Anhui Trust & Investment Corp. → Guoyuan Securities.
Haitong	Heilongjiang Securities → Xing'an Securities; Xing'an Securities + Gansu Securities + Haitong Securities → Haitong Securities.
Hengtai	Inner Mongolia Securities → Hengtai Securities.
Hongyuan	Xinjiang Hong Yuan Trust & Investment Corp. → Hongyuan Securities; Xinjiang Securities + Hongyuan Securities → Hongyuan Securities.
HuaAn	Anhui Securities → HuaAn Securities.
Huafu	Fujian Huaxing Trust & Investment Corp. + Jiangmen Intl. Trust & Investment Corp. → Huafu Securities; Huafu Securities → GF Huafu Securities → Huafu Securities.
Huarong	China Huarong Asset Management Corp. (CHAMC) → Huarong Securities.
Huatai	Jiangsu Securities → Huatai Securities; Three Gorges Securities → Asia Securities; Asia Securities + Huatai Securities → Huatai Securities.
Huatai United	United Securities → Huatai United Securities.
Huaxi	Sichuan Securities → West China Securities → Huaxi Securities.
Lianxun	Huizhou Securities → Lianxun Securities.
Minsheng	Zhengzhou Securities → Yellow River Securities → Minsheng Securities.
Nanjing	Ningxia Securities → Northwest Securities; Northwest Securities + Nanjing Securities → Nanjing Securities.
Northeast	Jilin Securities → Northeast Securities.
Pacific	Yunnan Securities → Pacific Securities.
Qilu	Xiamen Jianfa Trust & Investment Corp. + Xiamen Intl. Trust & Investment Corp. + Shandong Intl. Trust & Investment Corp. → Qilu Securities; Shandong Securities → Tiantong Securities; Tiantong Securities + Qilu Securities → Qilu Securities.
Sealand	Guangxi Trust & Investment Corp. → Guangxi Securities → Sealand Securities.

Continued

Appendix II (Continued)

IB	Merged and acquired IBs and the resulting IBs
Shanghai	Shanghai Finance Securities + Shanghai Intl. Trust & Investment Corp. → Shanghai Securities.
Shenyin & Wanguo	Shanghai Intl. Securities + Shanghai Shenyin Securities → Shenyin & Wanguo Securities.
Sinolink	Chengdu Securities → Sinolink Securities.
Soochow	Suzhou Securities → Soochow Securities.
Southwest	Chongqing Securities → Southwest Securities.
UBS	Beijing Securities + Union Bank of Switzerland (UBS) → UBS.
Western	Shannxi Securities + Baoji Securities → Western Securities.
Yingda	V-Sun Securities → Yingda Securities.

This appendix presents a list of major takeovers of Chinese IBs occurring over the period 1993 to 2010.

Appendix III: Reference Portfolio Benchmark

In this study, each IPO firm is matched to one reference portfolio based on the existing listed firms classified with similar size and B/M as well as within the same industry category. Specifically, at the end of the calendar year before the IPO, all the stocks listed on the SHSE and SZSE are sorted into three size (value) portfolios: Low, Medium, or High, according to whether their market value (B/M) are included in the lowest 30, middle 40, or highest 30 percentile, respectively. The size of the IPO firm is measured as the market capitalization of its common equity (the product of the number of shares outstanding and the first trading day closing price), while B/M for the IPO firm is calculated using the first recorded post-issue book value divided by the market capitalization on the first trading day. In addition, we assign each IPO firm to one of 14 industry portfolios, according to the two-digit ICB codes. Then each IPO firm in our sample will match with one of 126 (9×14) reference portfolios to control for the size and value effects as well as the industry effect.

Industry	Two-digit ICB codes Supersector	Whole market		SHSE		SZSE	
		Gross proceeds	N	Gross proceeds	N	Gross proceeds	N
0 Oil & Gas	05 Oil & Gas	99,804.40	28	83,836.22	8	15,968.18	20
1 Basic Materials	13 Chemicals	84,621.25	181	27,965.48	66	56,655.77	115
	17 Basic Resources	219,311.65	170	175,485.78	91	43,825.87	79
2 Industrials	23 Construction & Materials	156,227.53	112	126,041.73	45	30,185.80	67
	27 Industrial Goods & Services	333,247.83	453	189,608.50	161	143,639.33	292
3 Consumer Goods	33 Automobiles & Parts	36,118.00	69	17,230.50	31	18,887.50	38
	35 Food & Beverage	60,504.50	121	27,152.89	53	33,351.61	68
	37 Personal & Household Goods	71,336.93	149	23,101.52	53	48,235.41	96
4 Health Care	45 Health Care	70,169.89	140	22,480.15	60	47,689.74	80
5 Consumer Services	53 Retail	23,902.55	63	10,634.77	34	13,267.78	29
	55 Media	14,230.83	20	6,320.78	7	7,910.05	13
	57 Travel & Leisure	34,489.24	39	27,917.30	19	6,571.94	20
7 Utilities	75 Utilities	48,203.48	64	38,301.22	40	9,902.26	24
9 Technology	95 Technology	69,770.57	140	14,946.77	39	54,823.80	101
Full sample		1,321,938.65	1,749	791,023.61	707	530,915.04	1,042

This appendix presents the distribution of the sample of 1,749 IPOs over the period 1993 to 2010 by the industry category, according to the two-digit ICB codes (see full details and description of the ICB at: <http://www.icbenchmark.com>), in terms of the raised aggregate gross proceeds and the total number of IPOs. The gross proceeds are presented in millions of RMB, adjusted using CPI (2005 = 100). RMB 1.00 was approximately USD 0.1239 on December 31, 2005. The whole sample consists of 786 IPOs issued during the pre-reform period and 963 IPOs issued during the post-reform period.

Appendix IV: Definitions of All Variables

BHAR36 represents the equal-weighted reference portfolio-adjusted three-year BHAR of IPOs. The reference portfolio benchmark is based on the existing listed firms classified with similar size and B/M as well as within the same industry category, according to the two-digit ICB codes (see Appendix II). **LNBHAR36** represents the natural logarithm of 1,000% plus **BHAR36**.

IBR_{MAIN} represents the three-year moving average ($t-3, t-2, t-1$) of the aggregate gross proceeds raised by each IB in each calendar year t , over the sample period. The gross proceeds are presented in millions of RMB, adjusted using CPI (2005 = 100).

IBR_{ALT} represents the three-year moving average ($t-3, t-2, t-1$) of the total number of IPOs managed, by each IB in each calendar year t , over the sample period.

IR represents the market-adjusted initial return of each IPO, which is computed as the percentage difference between the offering price and the first trading day closing price, relative to corresponding return on the SHSE or SZSE A-Share Index for IPOs on the SHSE or SZSE, respectively.

LAG represents the number of days between the offering and listing dates. **LNLAG** represents the natural logarithm of **LAG**.

AGE represents the number of years since the founding year of the IPO firm as of the offering date. **LN(AGE + 1)** represents the natural logarithm of 1 plus **AGE**.

SIZE represents the raised aggregate gross proceeds of the IPO in millions of RMB, adjusted using CPI (2005 = 100). **LNSIZE** represents the natural logarithm of **SIZE**.

STATE represents the fraction of state-owned shares by total shares outstanding of the IPO firm.

MARKET represents the overall market performance prior to the offering, which is computed as the weighted average buy-and-hold return of the corresponding market index in three months prior to offering. The SHSE and SZSE A-Share Indices provide the benchmark for IPOs on the SHSE and SZSE, respectively. The weights are 3 for the most recent month, 2 for the next, and 1 for the third month prior to offering (Derrien & Womack, 2003).